

PUBLIC HEALTH DEPARTMENT.

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REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING THE YEAR

— 1946 —

BY

W. M. FRAZER, O.B.E., M.D., M.Sc., D.P.H., BARRISTER-AT-LAW,

*Medical Officer of Health.*



C. Tinling & Co. Ltd., Printing Contractors, 53, Victoria Street, Liverpool.

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PUBLIC HEALTH DEPARTMENT,

LIVERPOOL.

MY LORD MAYOR, LADIES AND GENTLEMEN,

I have the honour to submit to you herewith my sixteenth Annual Report, relating to the health of the City of Liverpool.

Owing to the war, and in order to comply with the Ministry of Health's circular on the subject, the report has been considerably curtailed. The various modifications suggested by the Minister have been carried out and the text has been limited to matters of special interest. I desire to acknowledge figures and information for inclusion in the Report from the various Heads of Departments and also from the officers of the various voluntary hospitals and charitable institutions.

The total number of births was 18,528, giving a birth-rate of 25·2 per 1,000 as contrasted with a figure of 21·7 for the previous year. The total number of deaths from all causes was 9,671, giving a general death-rate of 13·2, as compared with 14·0 in 1945. The infantile mortality rate of 74 per 1,000 live births is little more than a quarter of those rates recorded at the beginning of the present century, having fallen from 81 in 1943.

The birth-rate of 25·2 per 1,000 is still considerably higher than that of England and Wales, which is 19·1 per 1,000. Two deaths occurred from puerperal fever as contrasted with seven in 1945, and the maternal mortality rate was 0·99 per 1,000 births, the lowest ever recorded in Liverpool. Twenty years ago the comparable figure was 4·20 per 1,000 births. Further information is given on page 23.

The fall in still-birth rate has been pronounced and this rate is now 28·3 per 1,000 total births. This is the same rate as that recorded in 1945, which itself was the first occasion since still-births have been registered that the rate has fallen below 30 per 1,000, and in 1935 the rate was 41·4.

The number of deaths from infective diseases (including influenza) was 273. The low rate was due to two factors, first the great reduction

in the number of cases and deaths from diphtheria, from which 25 persons died as against 28 in the previous year, which in itself was a record, a result due almost certainly to the extensive campaign of anti-diphtheria inoculation carried out in these two years, and secondly the almost complete absence of typhoid fever, from which no deaths occurred during the year.

I should like to be permitted to express my thanks to the Chairmen and Members of the Corporation Committees concerned with the Public Health Department for the courtesy and kindness with which they have considered the various suggestions and recommendations made to them.

I am,

Your obedient Servant,

W. M. FRAZER,  
*Medical Officer of Health.*



# CITY OF LIVERPOOL.

## SUMMARY

OF

## VITAL STATISTICS FOR 1946.

Area (land and inland water)	...	...	...	...27,321 Acres (43 sq. miles)
Population (Estimated by Registrar General)	...	...	...	734,620
Live Births	...	...	18,528	Live Birth rate ... 25·2 per 1,000 of estimated population.
Deaths (all causes)	...	...	9,671	Death rate ... 13·2 per 1,000 of estimated population.
Deaths (under 1 year of age)	1,382	Infant Mortality rate	} 74 per 1,000 live births	
Deaths from :—				
Seven principal Zymotic diseases	} 381	Zymotic death rate	} 0·52	} per 1,000 of the estimated population.
Pulmonary Tuberculosis	} 579	Pulmonary Tuberculosis death rate	} 0·79	
Other forms of Tuberculosis	} 78	Non Pulmonary Tuberculosis death rate	} 0·10	
Respiratory diseases	1,395	Respiratory death rate	} 1·90	
Cancer	... 1,312	Cancer death rate	} 1·78	
Maternal Deaths	...	19	Maternal Mortality rate	} 0·99 per 1,000 births.

## BIRTHS.

The number of live births recorded during the year 1946 was 18,528, equal to a rate of 25·2 per 1,000 of the estimated resident mid-year population. Of the total births, 9,595 were males and 8,933 were females. The number of illegitimate live births was 1,351 or 7·3 per cent. of the total births, 661 being males and 690 females.

The birth-rate in the City of Liverpool was considerably above the average of the great towns, which was 22·2 per 1,000 of the population, as well as of England and Wales taken as a whole, where the rate was 19·1 per 1,000.

The number of still-births registered was 539 as shown in the table below. This represented 28·3 per thousand of the total (live and still) births registered and 0·73 per 1,000 of the estimated population.

	LIVE BIRTHS.			STILL BIRTHS.		
	Males.	Females.	Total.	Males.	Females.	Total
Legitimate ...	8,934	8,243	17,177	275	212	487
Illegitimate ...	661	690	1,351	26	26	52
	9,595	8,933	18,528	301	238	539

The following figures show not only an increase in the actual number of illegitimate births, but an increase in the proportion of illegitimate births when compared with 1938.

	Births.	Birth Rate.	Illegitimate Birth Rate per 1,000 population.	% of Total Births.	Total Illegitimate Births.
1938	16,175	18·7	0·89	4·8	771
1942	13,729	20·5	1·30	6·3	871
1943	14,432	21·8	1·55	7·1	1,030
1944	15,412	23·1	1·91	8·3	1,274
1945	14,784	21·7	2·32	10·7	1,582
1946	18,528	25·2	1·84	7·3	1,351

## STILL-BIRTHS.

The following figures show the reduction in the numbers of still-births which have taken place in the City during the past eleven years and the corresponding rates per thousand of population and per thousand births. The latter rate is the more valuable as it expresses the proportion of



# CITY OF LIVERPOOL.

BIRTH AND DEATH RATES PER 1,000 POPULATION FOR THE YEARS 1865 TO 1946.





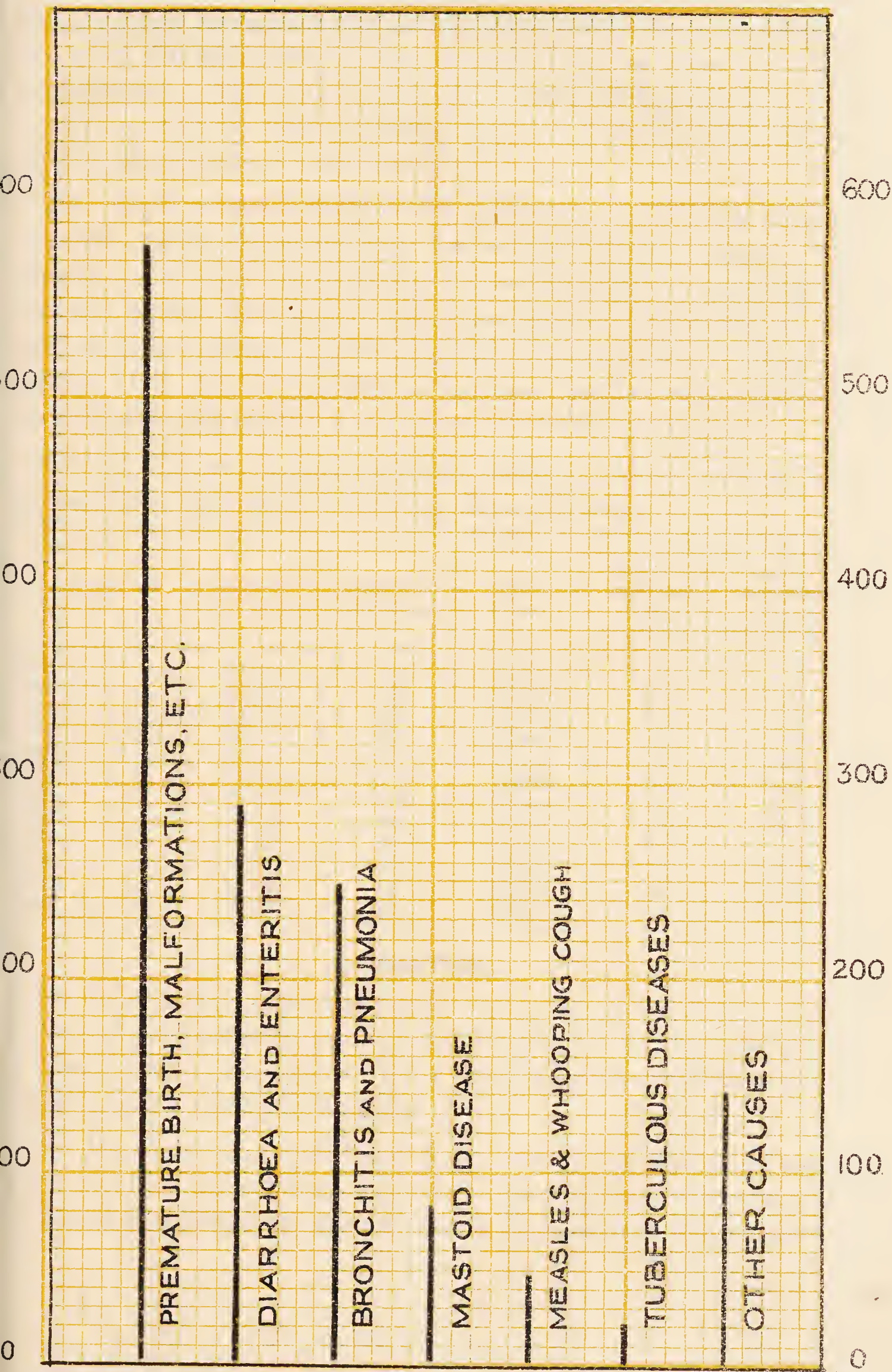


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# CITY OF LIVERPOOL

CHART SHEWING THE PRINCIPAL CAUSES OF DEATHS OF INFANTS UNDER ONE YEAR OF AGE DURING 1946





# CITY OF LIVERPOOL

THE LIVERPOOL MUSEUM AND ART GALLERY  
LIVERPOOL

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total births lost, the actual number of live births occurring varying from 17,347 in 1935 down to 13,291 in 1941 and up to 18,528 in 1946. It will be noted that there has been a marked and almost continuous fall in the still-birth rate throughout this period, thus constituting a considerable saving of life additional to that which has resulted from the infant mortality rate. The fall is 31 per cent. of the 1935 figure and the rate is now below 30 per thousand births, and it is probable that a further considerable reduction is still possible.

The causes of this reduction, which has also affected the country generally though not in the same degree, are somewhat obscure. The greater care of expectant mothers in the ante-natal clinics and the better obstetric services have undoubtedly contributed to this reduction, but there is some evidence to show that the better nutrition of expectant mothers of the labouring classes in war-time, together with diminished unemployment during this period, have also largely contributed.

The still-birth rate among legitimate babies was 28 per thousand and among illegitimate babies was 37 per thousand births.

Year.	-Registered Live Births.	Registered Still Births.	Total Births.	Still-births Rate per 1,000 population.	Still-births per 1,000 Live and Still Births.
1935.....	17,347	749	18,096	0·9	41·4
1936.....	17,403	708	18,111	0·8	39·1
1937.....	16,728	618	17,346	0·7	35·6
1938.....	16,175	639	16,814	0·7	38·0
1939.....	15,614	631	16,245	0·8	38·9
1940.....	15,016	519	15,535	0·7	33·4
1941.....	13,291	508	13,799	0·7	36·8
1942.....	13,729	552	14,281	0·8	38·6
1943.....	14,432	485	14,917	0·7	32·5
1944.....	15,412	492	15,904	0·7	30·9
1945.....	14,784	431	15,215	0·6	28·3
1946.....	18,528	539	19,067	0·7	28·3

### DEATHS.

The total deaths registered during the year numbered 9,671 (5,021 males and 4,650 females), equal to a death-rate of 13·2 per 1,000 of the estimated resident population. Since the commencement of the war the deaths of non-civilians are excluded.

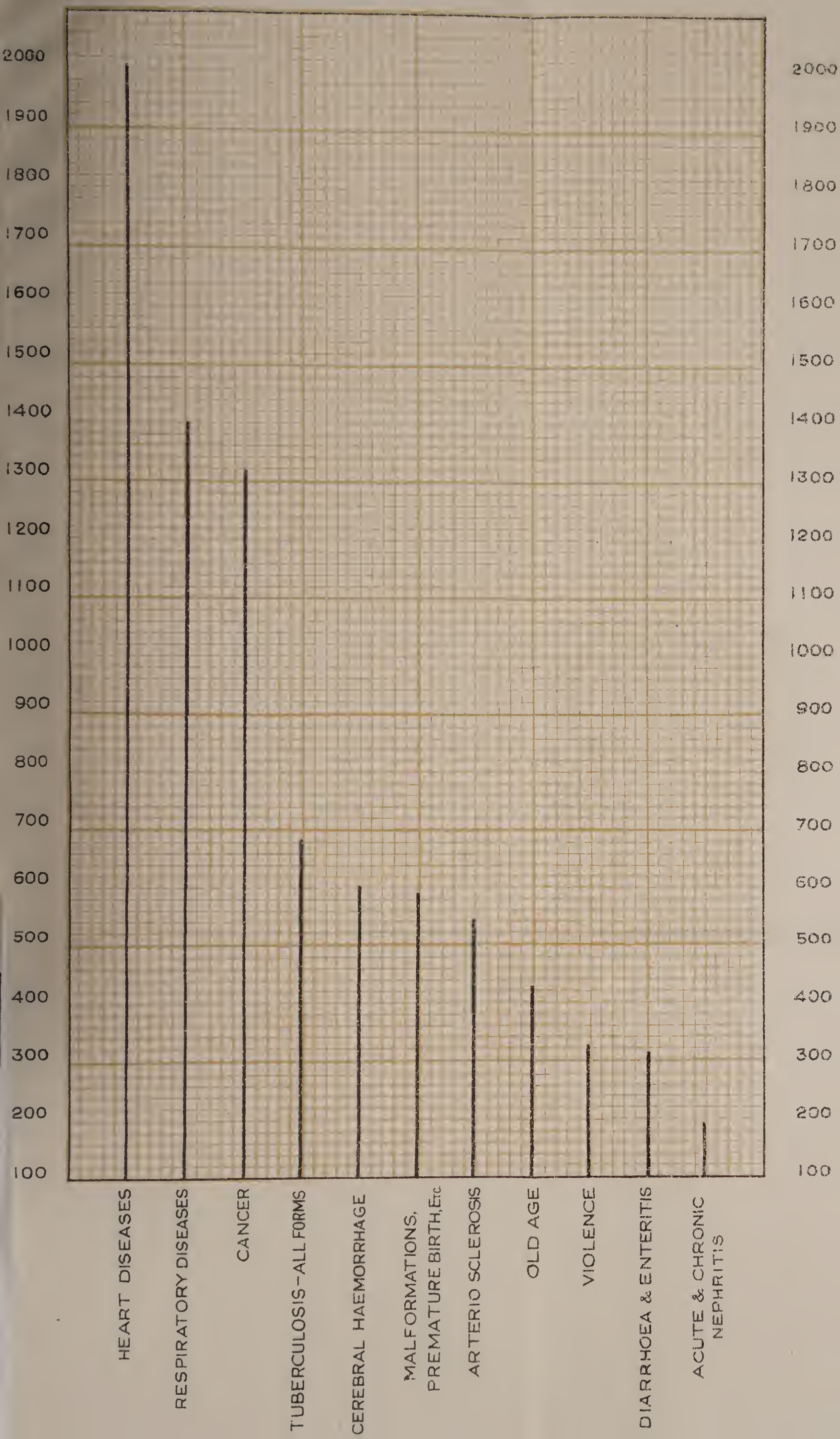
The death-rate for England and Wales was 11·5 and that of the great towns was 12·7. The following table shows deaths at various age periods, expressed as a percentage of total deaths, for each year 1915 to 1946:—

Year	Under 5 years.	AT AGES—YEARS.									
		5—	10—	20—	30—	40—	50—	60—	70—	80—	
1915 ...	% 33	% 2	% 4	% 4	% 7	% 9	% 12	% 13	% 12	% 4	100
1916 ...	30	3	4	5	6	9	12	14	13	4	100
1917 ...	29	3	4	5	7	9	12	14	13	4	100
1918 ...	29	5	6	8	8	9	11	12	9	3	100
1919 ...	25	4	5	7	8	9	12	13	13	4	100
1915-1919 (average)	29	3	5	6	7	9	12	13	12	4	100
1920 ...	33	2	4	5	7	9	11	13	12	4	100
1921 ...	33	2	4	5	6	9	11	13	12	5	100
1922 ...	28	2	4	5	6	9	12	15	14	5	100
1923 ...	30	2	4	5	6	9	12	14	13	5	100
1924 ...	29	2	4	4	6	8	12	15	15	5	100
1920-1924 (average)	30	2	4	5	6	9	12	14	13	5	100
1925 ...	28	2	4	4	5	9	12	15	15	6	100
1926 ...	28	2	3	5	6	9	12	15	14	6	100
1927 ...	25	2	3	5	5	9	12	16	16	7	100
1928 ...	25	2	4	5	5	9	12	16	16	6	100
1929 ...	23	3	3	5	5	9	12	16	17	7	100
1925-1929 (average)	26	2	3	5	5	9	12	16	16	6	100
1930 ...	20	3	4	5	5	9	14	17	16	7	100
1931 ...	23	2	3	5	5	8	12	17	18	7	100
1932 ...	22	2	3	5	5	8	13	17	17	8	100
1933 ...	21	2	3	5	5	8	13	17	18	8	100
1934 ...	20	2	3	5	6	8	12	18	18	8	100
1930-1934 (average)	21	2	3	5	5	8	13	17	18	8	100
1935 ...	17	2	3	5	5	8	13	19	20	8	100
1936 ...	16	2	3	5	5	7	14	19	21	8	100
1937 ...	17	2	2	5	5	7	13	19	21	9	100
1938 ...	16	1	3	4	5	7	13	20	22	9	100
1939 ...	13	1	3	4	4	7	14	21	23	10	100
1935-1939 (average)	16	2	3	5	5	7	13	19	21	9	100
1940 ...	14	2	3	4	5	8	14	21	20	9	100
1941 ...	15	2	4	5	6	8	13	20	19	8	100
1942 ...	14	1	2	4	5	7	14	22	22	9	100
1943 ...	14	1	2	3	5	7	13	22	23	10	100
1944 ...	12	1	2	4	4	7	13	23	24	10	100
1940-1944 (average)	14	1	3	4	5	7	13	22	22	9	100
1945 ...	13	1	2	3	4	7	13	22	23	12	100
1946 ...	16	1	2	3	3	6	12	21	24	12	100



# CITY OF LIVERPOOL

## COMPARATIVE VIEW OF THE PRINCIPAL CAUSES OF DEATH DURING THE YEAR 1946.







ANALYSIS OF CAUSES OF MORTALITY.

Years.	(a) Infective diseases (less Diarrhoea and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhoea).	Total Deaths from Classes (a), (b), (c) & (d)	(e) Cancer.	Total Deaths from all causes.
1871-1880	27,205	19,869	29,763	14,747	91,584	2,015	147,005
1881-1890	19,748	17,870	32,507	13,186	86,311	2,820	146,195
1891-1900	13,515	16,714	35,819	18,491	84,539	4,223	145,522
1901-1910	13,967	16,054	32,995	18,163	81,179	6,480	150,962
1911-1920	10,417	14,946	36,480	12,282	74,125	7,603	137,223
1921-1930	7,831	12,664	29,447	8,184	58,126	9,852	117,756
1931-1940	6,473	9,413	18,196	5,987	40,069	12,619	115,632
1941	623	846	2,226	447	4,142	1,211	13,253
1942	495	777	1,403	383	3,058	1,279	9,388
1943	238	773	1,856	399	3,266	1,337	9,719
1944	226	679	1,344	362	2,611	1,215	9,010
1945	200	701	1,620	435	2,956	1,230	9,523
1946	206	657	1,462	569	2,894	1,312	9,671

Deaths expressed as a percentage of total deaths from all causes (Proportionate Mortality).

Years.	(a)	(b)	(c)	(d)	Total Deaths from Classes (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	19.2	13.5	20.2	10.0	62.9	1.4	100.0
1881-1890	14.1	12.7	23.2	9.4	59.4	2.0	100.0
1891-1900	9.3	10.8	24.6	12.7	57.4	2.9	100.0
1901-1910	8.6	10.6	21.8	12.0	53.0	4.3	100.0
1911-1920	7.9	10.9	27.3	8.9	55.0	5.5	100.0
1921-1930	6.6	10.7	25.0	6.9	49.4	8.4	100.0
1931-1940	5.6	8.1	15.7	5.2	34.7	10.9	100.0
1941	4.7	6.4	16.8	3.4	31.3	9.1	100.0
1942	5.3	8.3	14.9	4.1	32.6	13.6	100.0
1943	2.4	8.0	19.1	4.1	33.6	13.7	100.0
1944	2.5	7.5	14.9	4.0	28.9	13.5	100.0
1945	2.1	7.4	17.0	4.6	31.1	12.9	100.0
1946	2.1	6.8	15.1	5.9	29.9	13.6	100.0

# Death Rates per 1,000 Population.

Years,	(a) Infective diseases (less Diarrhoea and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhoea).	Total Deaths from (a), (b), (c) & (d)	(e) Cancer.	Total Deaths from all causes.
1871-1880	5.2	3.6	5.7	2.8	17.3	0.4	28.5
1881-1890	3.6	3.2	5.9	2.4	15.1	0.5	26.1
1891-1900	2.2	2.7	5.9	3.0	13.8	0.7	23.9
1901-1910	1.9	2.2	4.5	2.5	11.1	0.9	20.0
1911-1920	1.3	1.9	4.7	1.6	9.5	1.0	18.1
1921-1930	0.9	1.4	3.3	0.9	6.5	1.1	13.6
1931-1940	0.7	1.1	2.1	0.7	4.7	1.5	13.7
1941	0.9	1.2	3.2	0.6	5.9	1.8	19.3
1942	0.7	1.1	2.1	0.6	4.5	1.9	14.0
1943	0.3	1.2	2.8	0.6	4.9	2.0	14.7
1944	0.3	1.0	2.0	0.5	3.9	1.8	13.5
1945	0.3	1.0	2.4	0.6	4.3	1.8	14.0
1946	0.3	0.9	2.0	0.8	3.9	1.8	13.2

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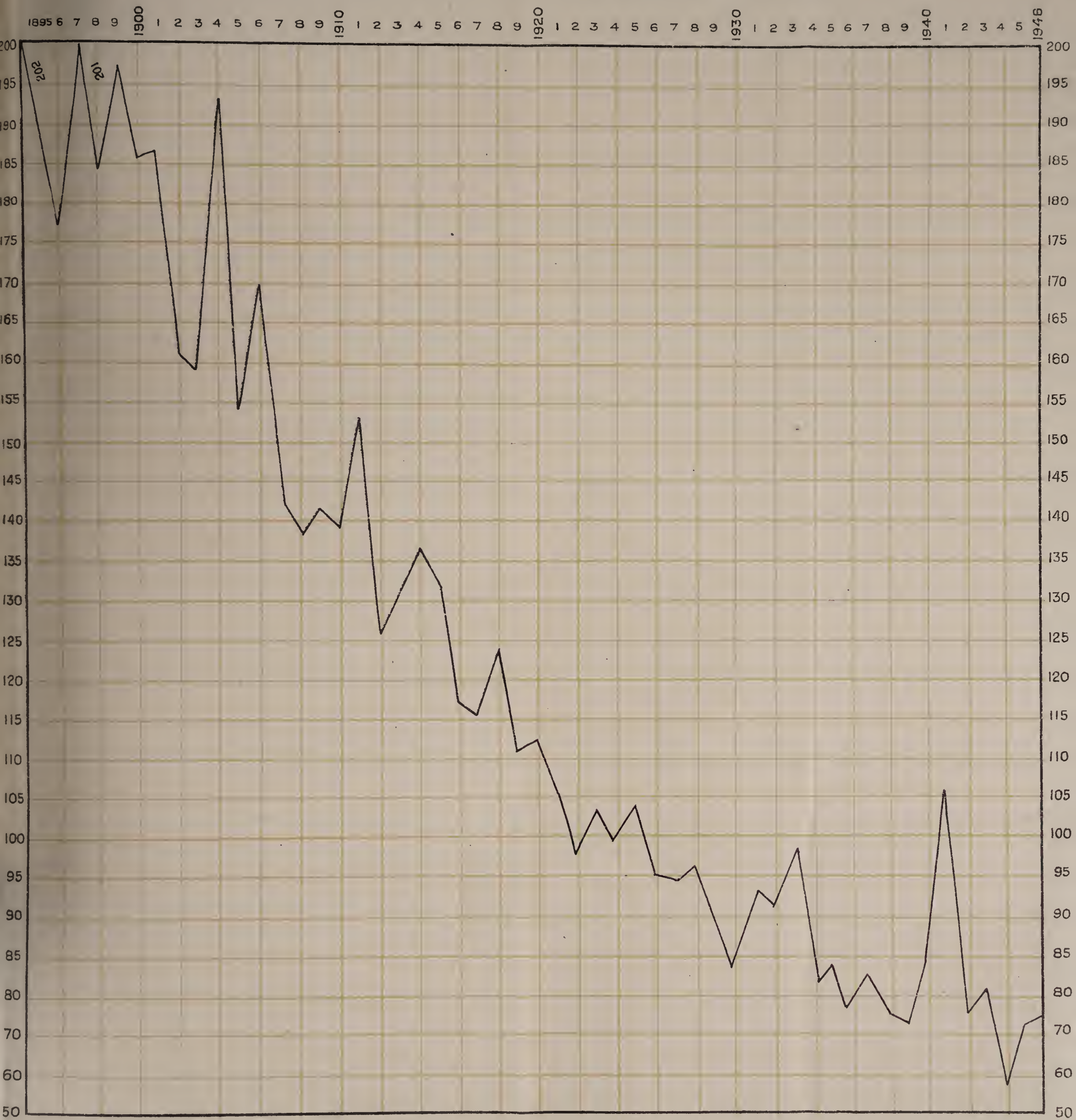
## Death-Rates expressed as a percentage of the rates experienced in 1871-1880 (Index Numbers).

Years,	(a)	(b)	(c)	(d)	Total Deaths from (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1881-1890	69.0	88.0	104.0	85.7	89.1	125.0	91.0
1891-1900	42.0	75.0	104.0	107.2	79.3	175.0	84.0
1901-1910	36.0	61.0	79.0	89.3	64.3	225.0	70.0
1911-1920	26.0	50.0	83.0	56.7	56.0	250.0	67.0
1921-1930	17.1	40.0	58.8	36.8	38.5	280.0	47.7
1931-1940	13.5	30.6	36.8	25.0	27.2	375.0	48.1
1941	17.3	33.3	56.1	21.4	34.1	450.0	67.7
1942	13.5	30.6	36.8	21.4	26.0	475.0	49.1
1943	5.8	33.3	49.4	21.4	28.3	500.0	51.6
1944	5.8	28.0	35.1	17.9	22.5	450.0	47.4
1945	5.8	28.0	42.1	21.4	24.8	450.0	49.1
1946	5.8	25.0	35.1	28.6	22.5	450.0	46.3



# CITY OF LIVERPOOL.

INFANT MORTALITY PER 1,000 BIRTHS, 1895-1946.





## INFANTILE MORTALITY.

The following table shows the deaths and death-rates of infants under one year of age for tthe year 1946 :—

	Infant Deaths.	Infant Death Rates.
All Infants      ...      ...      ...      ...	1,382	74 per 1,000 live births.
Legitimate Infants      ...      ...      ...	1,213	71      „      legitimate live births.
Illegitimate Infants      ...      ...      ...	169	125      „      illegitimate live births.

In 1934 the infant death-rate for legitimate live births was 75 and for illegitimate live births 168, i.e. more than double that of the legitimately born infants.



## Analysis of causes of Infant Mortality in successive quinquennia 1896-1945, and the year 1946

## (A.)—Recorded Deaths.

Years.	1 Total Births.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases	6 Respira- tory Diseases	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions, Premature Birth, Maras- mus, &c.
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,981
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125
1936/1940	80,936	6,226	573	74	519	1,457	698	2,691
1941/1945	71,648	5,512	341	71	403	1,704	548	2,193
1946	18,528	1,382	77	11	94	272	306	574

## (B.)—Death Rates per 1,000 Births.

1896/1900	*33.4	189	12.7	6.2	22.1	32.0	57.1	51.0
1901/1905	33.4	172	13.0	5.5	21.2	29.3	43.7	48.1
1906/1910	32.2	149	13.6	3.9	17.4	26.6	33.0	46.7
1911/1915	29.3	137	11.6	3.1	12.8	26.1	32.5	43.1
1916/1920	24.9	116	11.1	2.0	10.9	28.4	18.8	42.0
1921/1925	25.1	100	10.2	1.9	5.5	26.6	17.1	36.1
1926/1930	22.1	94	10.2	1.1	4.2	26.7	17.4	31.1
1931/1935	20.5	89	10.1	0.9	4.2	23.1	13.4	35.3
1936/1940	19.4	77	7.0	0.9	6.4	17.9	8.8	32.9
1941/1945	21.3	78	4.8	1.0	5.6	24.1	7.7	30.7
1946	25.2	74	4.1	0.6	5.1	14.7	16.5	31.9

\*In column 1 the rates indicate the number of births per 1,000 of the population.

## (C.)—Death Rates expressed as a percentage of the rates recorded in 1896-1900.

1896/1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1901/1905	100.0	91.0	102.3	89.3	95.9	91.5	76.5	94.0
1906/1910	93.0	78.6	107.1	62.9	78.6	83.1	57.8	91.0
1911/1915	87.0	72.5	91.9	50.0	57.9	81.5	56.9	84.0
1916/1920	76.0	61.4	87.4	32.2	49.3	88.7	32.7	82.0
1921/1925	75.1	54.9	80.3	30.6	24.9	84.7	29.9	70.8
1926/1930	66.2	49.7	80.3	17.7	18.9	83.5	30.4	60.9
1931/1935	61.4	47.2	79.5	14.8	18.9	72.2	23.4	69.2
1936/1940	58.1	40.7	55.1	14.5	29.0	55.9	15.4	64.5
1941/1945	63.8	41.3	37.8	16.1	25.3	75.3	13.5	62.0
1946	75.4	39.1	32.3	9.7	23.1	46.0	28.9	60.8

## CANCER.

There was an increase in the number of deaths recorded from cancer, namely, 1,312, as compared with 1,230 in 1945, this being equivalent to a death-rate of 1·8 per 1,000 of the population.

Progress continued to be made during the year with a view to implementing the terms of the interim arrangements made under the Cancer Act of 1939 and which had received the approval of the Ministry of Health in 1943. The Liverpool Cancer Control Organisation, to which the City Council has delegated the administration of these arrangements, and on which it is represented, extended to other areas in the neighbourhood its scheme for the co-ordination of facilities for the examination of persons suspected to be suffering from cancer and for the treatment of cases where the diagnosis of the disease is confirmed. It is hoped that eventually the scheme will serve a population of nearly two million persons.

### DEATHS FROM CANCER AT VARIOUS AGE-PERIODS, 1946.

Organs Affected.	Males.	Females.	Number of Deaths.									All Ages.
			At Ages—Years									
			Under 10	10-	25-	40-	50-	60-	70-	75-	80-	
Buccal Cavity	35	7	—	—	1	3	—	13	15	4	6	6
Stomach ...	166	131	—	—	7	25	60	116	46	26	17	297
Liver ...	14	23	—	1	3	3	11	13	1	2	3	37
Intestines ...	142	174	—	1	6	22	61	98	62	43	23	316
Lungs ...	202	32	—	—	14	39	67	79	22	11	2	234
Female Genital Organs	—	86	—	—	8	16	20	25	9	4	4	86
Breast ...	—	126	—	—	10	19	32	23	20	12	10	126
Skin ...	8	4	—	—	—	2	3	1	1	3	2	12
Other Organs...	108	54	3	4	6	13	28	50	32	18	8	162
	675	637	3	6	55	142	282	418	208	123	75	1,312

## CREMATION.

The number of cremations which took place at the Liverpool Crematorium during 1946 was 802, the highest number yet recorded.

## NOTIFICATION OF INFECTIOUS DISEASE.

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The following is a list of the diseases notifiable in Liverpool during 1946:—

Anthrax	Paratyphoid Fever
Acute Poliomyelitis	Plague
Cerebro-spinal Fever	Pneumonia, Acute Influenzal
Cholera	Pneumonia, Acute Primary
Diphtheria	Polio-encephalitis, Acute
Dysentery	Puerperal Pyrexia
Enteric (Typhoid) Fever	(including Puerperal Fever)
Erysipelas	Relapsing Fever
Encephalitis Lethargica, Acute	Scarlet Fever or Scarlatina
Malaria	Smallpox
Measles	Tuberculosis (all forms)
Membranous Croup	Typhus Fever
Ophthalmia Neonatorum	Whooping Cough



TABLE I.

NUMBERS OF CASES OF INFECTIOUS DISEASES COMING TO NOTICE DURING 1946  
AND NUMBERS ADMITTED TO HOSPITAL.

	January	February	March	April	May	June	July	August	September	October	November	December	TOTALS	Cases admitted to hospital	Per centage admitted to hospital
Smallpox ...	—	—	—	2	7	2	—	—	—	—	—	—	11	11	100·0
Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ...	1	1	—	—	—	—	1	2	1	—	1	—	7	7	100·0
Scarlet Fever ...	203	148	168	173	121	102	109	100	134	218	261	262	1999	840	42·0
Measles and German Measles...	236	320	745	948	927	1217	585	256	149	189	211	313	6096	566	9·2
Diphtheria ...	80	58	42	39	41	31	32	29	45	49	35	37	518	509	98·3
Puerperal Pyrexia	31	24	25	31	19	21	17	26	17	37	18	20	286	270	94·4
Erysipelas ...	24	19	33	17	27	23	15	17	17	10	27	24	253	133	52·6
Cerebro-spinal Fever	4	9	7	6	4	4	1	2	—	—	7	4	48	46	96·3
Poliomyelitis and Polio-encephalitis	—	1	—	—	—	1	—	3	1	7	2	—	15	15	100·0
Ophthalmia Neonatorum ...	16	17	38	19	23	22	19	27	22	20	14	19	256	155	60·5
Pneumonia & Influen- zal Pneumonia	129	109	135	103	80	74	46	55	43	42	92	149	1057	199	18·8
Malaria ...	15	6	12	9	5	11	5	9	10	5	6	5	98	63	64·3
Dysentery ...	35	18	36	17	22	7	4	5	3	3	6	4	160	146	91·2
Encephalitis Lethargica ...	—	—	—	—	—	1	—	—	—	—	—	—	1	1	100·0
Whooping Cough ...	27	37	83	82	130	121	119	220	151	166	321	273	1730	320	18·5
Anthrax ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox ...	9	8	13	23	27	70	34	16	16	11	20	27	274	100	36·5
TOTALS ...	810	775	1337	1469	1433	1707	987	767	609	757	1021	1137	12809	3381	26·4

The numbers of patients admitted to hospital include the cases which occurred while in hospital.

## INFECTIOUS SICKNESS.

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### Plague.

No case of plague occurred in the city during the year.

### Smallpox.

Eleven cases of smallpox occurred in the city during the year with two deaths. The disease was variola major of a severe type.

The cases occurred in three groups. The first group, commencing in March, consisted of two cases of which the second was infected by the first. The first case was mistaken for chicken pox until the second case established the true diagnosis. This infection was thought to be traceable to a soldier son returned from India on a transport in which there had been a case of smallpox, though he himself did not contract the disease. No other likely source of infection could be found.

The second group, commencing in April, comprised an initial case and three subsequent secondary cases. The source appeared to be a returning service man from India whose illness was thought by the Service Medical Officer to be exceptionally severe scarlet fever. Although this mistake in diagnosis was rectified within an hour of the patient's landing, he must be considered to be the source of infection. The cases in this group were very severe, and it is among them that the two deaths occurred.

The third group, commencing in May, was made up of an initial case, two secondary cases and two tertiary cases infected from the latter. The initial case occurred in the Everton district and was mistakenly diagnosed chicken pox until subsequent events corrected the diagnosis. The source of infection was not discovered. This disquieting feature led to a house-to-house search for cases of illness within a considerable radius of the patient's home but no missed cases were found.

The avoidance of a widespread epidemic arising from any of these groups of cases is attributable to the isolation of all cases in the Port Health Hospital, New Ferry, immediately they were found, and to the rapid vaccination of all known contacts together with daily observation for seventeen days following the last day of contact. The vaccinal state of



Liverpool is better than most places, and this, too, was an important factor in preventing spread. Needless to say, the re-vaccination of medical officers, nurses, sanitary inspectors, health visitors, ambulance drivers and attendants and others whose work had direct or indirect relationship to the outbreak was carried out thoroughly and expeditiously.

It is noteworthy that mass vaccination of the public was not undertaken. Mass vaccination is not to be undertaken lightly. It is not only difficult to organize *if it is to be effective*, requiring a large amount of medical help additional to that normally at the disposal of the department, but the resultant absenteeism due to real or fancied incapacity is disturbing to commerce. It was decided, therefore, to refrain from mass vaccination until there was clear evidence that the outbreak was out of control. This decision was justified by events.

### Primary Vaccinations.

The numbers of primary vaccinations in Liverpool during the year 1945 and six previous years are given below:—

	1939.	1940.	1941.	1942.	1943.	1944.	1945.
—Number of children born .....	16,543	15,762	12,054	14,084	15,368	16,975	16,315
—Number of primary vaccinations.	10,447	9,466	7,227	8,984	10,012	10,901	9,982
—Number of exemption certificates granted.	2,362	1,889	1,206	1,237	1,492	1,711	1,450
—Number of certificates of insusceptibility sent.	70	119	56	86	102	53	48

### Typhus Fever.

No case of typhus fever was reported during the year.

### Anthrax.

Two cases of anthrax were treated during 1946 at the City Hospital, Fazakerley, and both recovered. Both patients resided outside Liverpool. They contracted the disease handling imported hides at the docks.

Six persons attended the hospital for investigation as suspected cases. None was suffering from anthrax.

### Typhoid and Paratyphoid Fever.

During the year there occurred four cases of typhoid fever and three cases of paratyphoid "B" fever. One of the typhoid patients, was infected in India, and one other was secondary to this case. The source of infection in the remaining two typhoid cases was not traced. Of the three paratyphoid cases, two were admitted to Liverpool hospitals from districts outside Liverpool and one was infected in Ireland while on holiday.

#### *Port Cases of Typhoid Fever.*

During the year 12 cases of typhoid fever were imported from overseas.

### Register of Chronic Typhoid and Paratyphoid Excretors.

The following chronic excretors of typhoid or paratyphoid organisms are known and under observation. Bacteriological examination of faeces is carried out every three months.

Case Number.	Sex.	Age.	Disease.	Date of illness.	Date faeces last positive.
2	F.	57	Paratyphoid " B "	July, 1941	Jan., 1947
4	M.	58	fever.	July, 1941	Jan., 1947
6	F.	52	"	July, 1941	Jan., 1947
7	F.	45	"	July, 1941	Jan., 1947
8	F.	42	"	Aug., 1941	Jan., 1947

Since last year, case number 12, a typhoid carrier, has been removed from the register, having ceased to excrete the organism.

### Undulant Fever.

No case of undulant fever was reported during the year.

**Diphtheria.**

During 1946, 518 cases of diphtheria were reported, a case-rate of 0·7 per 1,000 of the population. Of these cases, 25 proved fatal, making a fatality rate of 4·8 per 100 cases and a mortality rate of 3·4 per 100,000 of the population.

**AGES AT DEATH.**

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
2	5	6	3	2	4	1	...	1	1	...	...	...	25

**AGES OF NOTIFIED CASES.**

15	21	35	47	36	188	81	35	42	8	6	4	...	518
66%						34%							

**PERCENTAGE FATALITY AT EACH AGE.**

13·3	23·8	17·1	6·4	5·6	2·1	1·2	...	2·4	12·5	...	...	...	4·8
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**Scarlet Fever.**

During 1946, 1,999 cases of scarlet fever were reported, a case-rate of 2·7 per 1,000 of the population. Of these cases, none proved fatal.

**AGES AT DEATH.**

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
...	...	...	...	...	...	...	...	...	...	...	...	...	...

**AGES OF NOTIFIED CASES.**

12	49	100	154	153	852	445	130	60	30	13	...	1	1,999
23·4%					42·6%	22·3%	11·7%						

**PERCENTAGE FATALITY AT EACH AGE.**

..	...	...	...	...	...	—	...	...	...	...	...	...	...
----	-----	-----	-----	-----	-----	---	-----	-----	-----	-----	-----	-----	-----



## Inoculation against Diphtheria.

TABLE IV.

## NUMBER OF COMPLETED DIPHTHERIA INOCULATIONS.

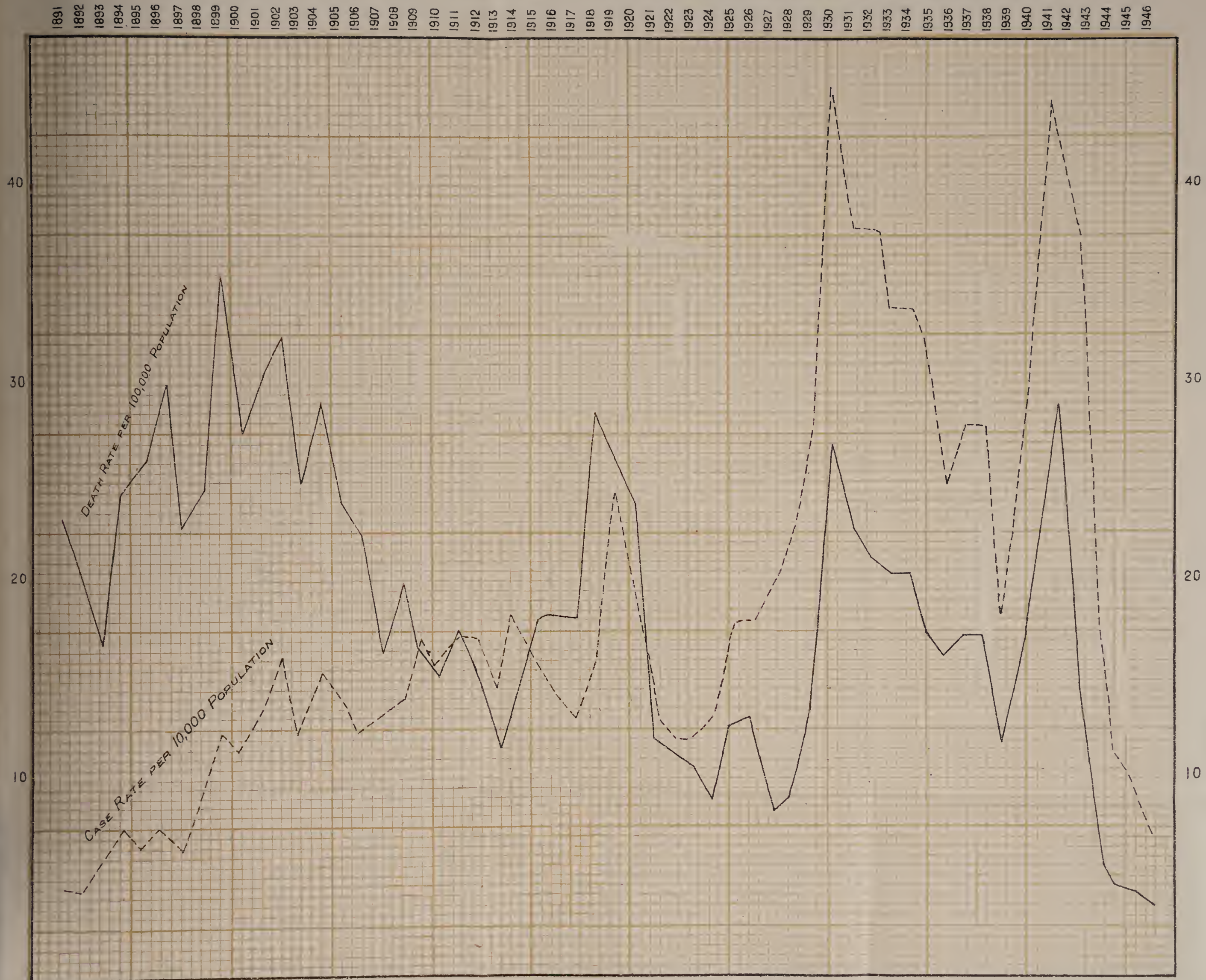
Where or by whom inoculated.	1925- 35	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
<b>INOCULATION CLINICS :</b>												
Carnegie ... ..	2166	367	237	196	104	64	452	1,503	205	81	32	—
Townsend Avenue ... ..	1443	305	183	197	151	167	1,006	2,287	688	468	385	56
Child Welfare Centres ... ..	198	452	1119	1792	1096	859	2,617	14436	8271	7717	8875	834
<b>SCHOOLS :</b>												
Public Elementary ... ..	16870	6251	4855	6356	2978	1,738	2,503	7,926	12907	5430	6052	844
Residential ... ..	2261	431	382	389	137	156	1,021	39	378	253	408	20
Secondary ... ..	—	—	—	—	—	—	—	408	1235	154	718	22
<b>MUNICIPAL HOSPITALS :</b>												
Fazakerley ... ..	3212	267	150	182	124	113	66	111	69	76	68	—
Fever Hospitals—North, South and East ... ..	812	113	202	185	238	123	50	46	40	44	30	—
Alder Hey ... ..	535	163	148	152	121	76	47	131	120	77	61	—
Olive Mount ... ..	630	24	41	56	29	2	13	74	97	118	175	11
O'her Municipal Hospitals ... ..	115	92	80	86	84	49	54	121	47	64	80	—
Miscellaneous ... ..	1211	5	19	4	5	8	1	45	19	6	—	—
Medical Practitioners ... ..	673	78	85	71	39	63	257	241	121	133	75	—
<b>TOTALS ... ..</b>	<b>30126</b>	<b>8548</b>	<b>7501</b>	<b>9666</b>	<b>5106</b>	<b>3,418</b>	<b>8,087</b>	<b>27368</b>	<b>24197</b>	<b>14621</b>	<b>16959</b>	<b>18</b>

GRAND TOTAL ... .. 173,777



# CITY OF LIVERPOOL

DIPHTHERIA 1891-1946. CASE RATES PER 10,000 POPULATION AND DEATH RATES PER 100,000 POPULATION.









Age at date of inoculation.	1925-1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	Ratio of inoculated to total population at end of year.
Under 1 yr.	71	13	19	2	1	5	4	1	5	2	4	21	33	1144	2930	3413	
1 +	189	183	94	213	211	359	595	454	671	413	1096	3632	1938	4373	3552	2581	Total under 5 years of age 24,052, being 35.5% of the population of this age.
2 +	146	189	219	78	232	240	461	524	152	282	857	2551	1181	562	1302	916	
3 +	154	189	246	164	111	259	367	433	248	96	499	2192	1094	659	366	635	
4 +	177	253	466	301	489	257	698	710	453	204	363	2490	1124	589	609	287	
5 +	199	1224	1375	1637	1541	2297	829	2286	1133	737	1254	1637	1874	1231	1284	2089	
6 +	197	1405	1583	1999	1563	2497	1820	1361	1042	771	1218	2868	871	1020	1315	2019	Total 5-9 years of age 42,781, being 64.6% of the population of this age.
7 +	182	1048	1357	1222	872	1211	823	1110	243	284	689	2032	1514	400	978	1334	
8 +	157	585	519	489	216	304	320	242	138	37	241	1469	1495	643	387	1052	
9 +	154	351	266	157	100	75	110	99	26	32	84	1054	1550	593	684	1477	
10 +	174	179	140	132	100	103	96	95	75	63	154	530	1585	594	621	948	
11 +	204	214	203	158	120	124	115	113	90	77	182	1137	938	550	602	667	Total 10-14 years of age 46,819, being 74.0% of the population of this age.
12 +	228	239	227	176	133	137	128	126	100	85	216	1385	2265	255	620	363	
13 +	208	216	205	159	122	125	117	114	90	78	183	1236	2086	419	291	314	
14 +	46	177	115	35	27	27	25	25	20	17	40	213	478	46	73	22	
15 +	285	298	284	220	167	172	160	158	124	106	260	433	424	328	290	258	
Totals.	2771	6647	7374	7221	6116	8548	7501	9666	5106	3418	8087	24368	24107	44621	16057	18180	

TABLE VI.  
DIPHTHERIA—COMPARATIVE INCIDENCE AMONG INOCULATED AND NON-INOCULATED CHILDREN  
UNDER FIFTEEN YEARS OF AGE IN LIVERPOOL.

	1944.		1945.		1946.		Aggregate 1942/1946.	
	Inoculated.	Not Inoculated.	Inoculated.	Not Inoculated.	Inoculated.	Not Inoculated.	Inoculated.	Not Inoculated.
Number of child-years at risk ...	97,315*	94,805	102,723*	90,337	110,824*	83,486	460,530	500,368
Diphtheria cases .....	48	579	64	510	33	390	303	4,311
Annual rate of incidence per 1,000 child-years .....	0.49	6.10	0.62	5.64	0.30	4.67	0.66	8.61
Ratio .....	1 to 12.4		1 to 9.1		1 to 15.6		1 to 13.0	
Diphtheria deaths .....	2	27	0	26	0	23	2	208
Annual rate of dying per 1,000 child-years .....	0.02	0.28	Nil	0.29	Nil	0.27	0.0043	0.41
Ratio .....	1 to 14		—		—		1 to 95	

\* Consisting of (a) all children under 13 inoculated before the end of the previous year; (b) five-sixths of the children of 13 years and one-sixth of the children of 14 years inoculated before the end of the previous year; (c) three-quarters of the children inoculated during the first half of the year of risk and (d) one-quarter of the children inoculated during the last half of the year of risk.



**Measles.**

During 1946, 6,040 cases of measles were reported, representing a case-rate of 8.2 per 1,000 of the population. The number of deaths was 25, making a fatality-rate of 0.4 per 100 cases and a mortality-rate of 3.4 per 100,000 of the population.

**DEATHS FROM MEASLES.**

AGES AT DEATH.													
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
11	10	1	1	1	—	—	—	—	—	—	—	1	25

AGES OF CASES.												
429	815	1010	1034	852	1,763	100	37					6,040

PERCENTAGE FATALITY AT EACH AGE.												
2.6	1.1	0.1	0.1	0.1	—	—	2.7					0.4

**Whooping Cough.**

During 1946, 1,730 cases of whooping cough came to the notice of the Health Department, a figure representing a case-rate of 2.3 per 1,000 of the population. Of these cases 38 proved fatal, corresponding to a death-rate of 5.1 per 100,000 of the population.

Number of Deaths from Whooping Cough at various Age Periods during 1946.							Total Deaths all ages.	Deaths expressed as a Percentage of Total Deaths.						
Under 1 year.	1+	2+	3+	4+	5+	10+		under 1 year.	1+	2+	3+	4+	5+	10+
31	5	1	—	—	1	—	38	81.6	13.2	2.6	—	—	2.6	—



## Cerebro-spinal Fever.

TABLE VII.

CASES AND DEATHS DURING 1946 AND NINE PREVIOUS YEARS.

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Cases ... ..	94	76	70	468	453	201	83	58	47	48
Deaths ... ..	47	37	28	84	79	38	22	21	9	13
Fatality-rate per 100 cases ... ..	50·0	48·7	40·0	17·9	17·4	18·9	26·5	36·2	19·1	27·1

The fall in the fatality rate which has occurred in the last seven years is, in the main, due to the success of treatment with Sulphonamide drugs.

## Deaths from Influenza and other Respiratory Diseases.

TABLE VIII.

	Yearly average number of deaths.	Percentage proportion to all deaths.	Respiratory death-rate per 1,000 population.	Death-rates compared with the 1871-80 death-rate called 100.
1871-80 ...	2,976	20·2	5·7	100
1881-90 ...	3,251	23·2	5·9	104
1891-1900 ...	3,582	24·6	5·9	104
1901-10 ...	3,299	21·8	4·5	79
1911-20 ...	3,648	27·3	4·7	83
1921-30 ...	2,904	24·7	3·5	61·4
1931-40 ...	1,762	15·1	2·1	36·8
1941... ..	2,226	16·8	3·2	56·1
1942... ..	1,403	14·9	2·1	36·8
1943... ..	1,856	19·1	2·8	49·1
1944... ..	1,344	14·9	2·0	35·1
1945... ..	1,620	17·0	2·3	40·3
1946... ..	1,462	15·1	2·0	35·1

## Dysentery.

During 1946, 158 cases of bacillary dysentery were reported in the city—76 Flexner, 80 Sonne, and 2 in which no organism was found. In addition, there were 2 cases of amoebic dysentery contracted abroad.

## MATERNITY and CHILD WELFARE.

### Vital Statistics

Live births	...	18,528	Live birth rate	...	25·2
Still-births	...	539	Still-birth rate	...	0·7
Total births		...	19,067		

Infant Mortality rate	...	...	74
Neo-natal Mortality rate	...	...	37·4
Maternal Mortality rate	...	...	0·99

### THE MIDWIFERY DEPARTMENT.

During the year, 289 midwives gave the required notice under Section 10 of the Midwives Act, 1902, of their intention to practise midwifery in this city. The number of municipal midwives at the end of 1946 was 50 and 2 temporary, and they attended—

Midwifery cases	...	...	4,396
Maternity cases	...	...	307
		—	4,703

### Statement of Notifications of Live and Still Births received during the year 1946.

	1946.			Still Births per cent of total.
	Live Births.	Still Births.	Total.	
Midwives (Municipal) .....	4,396	80	4,476	1·8
Do. (Independent) .....	739	9	748	1·2
Medical Attendants .....	1,241	47	1,288	3·6
Liverpool Maternity Hospital . ...	2,373	115	2,488	4·6
Municipal Hospitals .....	9,780	324	10,104	3·2
Other Institutions .....	598	17	615	2·8
District Homes .....	1,301	22	1,323	1·7
	20,428	614	21,042	2·4



The number of still-births notified was 614, of which 155 were notified by midwives. Enquiries were made into the circumstances of all still-births.

### **Visits paid by Staff of the Midwifery Department.**

Routine and special visits to midwives ... ..	1,311
Visits regarding claims for fees from medical practitioners for attendance in emergency cases ... ..	2,267
Visits in respect of ophthalmia neonatorum ... ..	5,835
Special visits (puerperal pyrexia, venereal diseases, etc.) ...	1,201

### **Medical Assistance.**

Under the rules of the Central Midwives Board, midwives sought medical aid in 2,773 cases—2,142 mothers and 631 children.

### **Consultant Services.**

The total number of occasions on which the services of a consultant obstetrician were requisitioned in connection with cases of puerperal pyrexia or complications during pregnancy was 6.

### **Prevention of Spread of Infection.**

Five municipal midwives were suspended from practice in order to prevent the spread of infection.

### **Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926, 1928 and 1939.**

The number of cases of puerperal pyrexia notified during the year was 286. Of these, 270 were admitted to or occurred in hospitals, and 30 occurred in the practice of midwives, and in 9 cases nurses were provided.

### **Maternal Mortality.**

The number of live and still births registered in the city, together with maternal deaths and maternal death-rates, are as follows:—

BIRTHS REGISTERED.				MATERNAL MORTALITY.					
Year	Live Births	Still Births	Total Births	Puerperal Sepsis		Other Puerperal Causes		Total	
				Deaths	Rate per 1,000 Total Births	Deaths	Rate per 1,000 Total Births	Deaths	Rate per 1,000 Total Births
1927	19,020	735	19,755	25	1.26	58	2.94	83	4.20
1928	19,120	816	19,936	19	0.95	45	2.26	64	3.21
1929	18,888	753	19,641	26	1.32	40	2.04	66	3.36
1930	18,881	774	19,655	16	0.81	59	3.00	75	3.81
1931	18,626	722	19,348	20	1.03	35	1.81	55	2.84
1932	18,149	827	18,976	16	0.84	35	1.85	51	2.69
1933	16,929	680	17,609	29	1.65	31	1.76	60	3.41
1934	17,593	685	18,278	25	1.37	26	1.42	51	2.79
1935	17,347	749	18,096	29	1.60	30	1.66	59	3.26
1936	17,403	708	18,111	20	1.10	44	2.43	64	3.52
1937	16,728	618	17,346	10	0.58	30	1.73	40	2.31
1938	16,175	639	16,814	11	0.65	22	1.31	33	1.96
1939	15,614	631	16,245	5	0.32	24	1.54	29	1.86
1940	15,016	519	15,535	7	0.45	24	1.56	31	2.01
1941	13,291	508	13,799	9	0.68	23	1.74	32	2.42
1942	13,729	552	14,281	14	0.98	20	1.40	34	2.38
1943	14,432	485	14,917	12	0.80	22	1.47	34	2.27
1944	15,412	492	15,904	13	0.82	18	1.13	31	1.95
1945	14,784	431	15,215	7	0.46	16	1.05	23	1.51
1946	18,528	539	19,067	2	0.10	17	0.89	19	0.99

The table above shows a very remarkable decline in maternal mortality during the past 20 years.

It will be seen that this decline has affected both deaths from puerperal sepsis and also those from other causes. The death-rate from puerperal sepsis in Liverpool has normally been lower than in the country as a whole but it will be seen that during the past 20 years this figure has fallen to one-twelfth of that previously recorded.

The decline has been particularly rapid during the last two years and unquestionably this is due to the extending use of sulphone drugs and penicillin. The decline in other puerperal causes has been more consistent but has not reached the same degree. It is probable that the table as a whole shows a marked improvement in the care of both the expectant mother and of the patient in labour. This is an achievement of which the City can well be proud. Amongst the causes that are operative in the decline of deaths from other puerperal causes may, not improperly, be mentioned improved nutrition. In view of the high

birth-rate in 1946 this declining mortality shows a saving of 64 lives as compared with 1927, these lives being very important ones of mothers of young families.

### Special Investigation of Maternal Deaths.

As a result of inquiries it was found that 29 deaths occurred owing to pregnancy, child birth or concurrent diseases, such as heart disease or lung disease associated with pregnancy:—

Class I—Deaths directly due to childbearing ...	17
Class II—Deaths not primarily due to pregnancy ...	12

### Ophthalmia Neonatorum.

#### *Inflammation of the eyes of the newly-born*

The number of cases brought to the notice of the department and treated during the year was 980, namely:—

Mild cases ...	899
Severe cases ...	81
Cases brought forward from previous year ...	12
Loss of sight ...	—
Total ...	992

During the year, 51 babies were admitted to the City Hospitals.

Arrangements are made with the City Bacteriologist to examine the discharge from inflamed eyes in the newly-born.

No. of cases brought to the notice of the department.	Cases from which specimens were examined by the City Bacteriologist and at Hospital.	No. of cases of positive Gonorrhoea.	Percentage to total cases examined.	Percentage to total notifications.
980	122	32	26.2	3.3

### Nursing Homes.

No registrations were cancelled during the year. The nursing homes on the register at the end of the year numbered 18, the approximate number of beds being 188. Babies born in nursing homes numbered 995, including 6 twin births.



## THE HEALTH VISITORS' DEPARTMENT.

### Ante-Natal and Post-Natal Clinics.

Total number of centres at which ante-natal clinics are held	28
Number of clinic sessions held per week ... ..	64
„ „ post-natal sessions held per week, separately from ante-natal ... ..	4
„ „ new cases attending ante-natal clinics ... ..	29,987
Total attendance at ante-natal clinics ... ..	135,261
„ „ „ post-natal „ ... ..	5,895

### Child Welfare Clinics.

Total number of centres at which child welfare clinics are held ... ..	24
Number of clinic sessions held per week ... ..	44
„ „ new cases—Under 1 year of age ... ..	11,197
Aged 1-5 years ... ..	766
	<hr/> 11,963 <hr/>
Total attendances—under 1 year of age ... ..	90,188
Aged 1-5 years ... ..	16,227
	<hr/> 106,415 <hr/>

### Statistics relating to Home Visits.

Visits to expectant mothers by health visitors ... ..	6,986
Number of births visited during the year ... ..	18,447
Re-visits to infants during the 1st year ... ..	73,664
„ „ „ aged 1 year to 5 years ... ..	93,656
Visits paid to homes of nurse children ... ..	658
Visits to children discharged from municipal hospitals ...	1,576

### *Visits to cases of Infectious Disease—*

Visits to cases of measles (first visits, 6,894) ... ..	9,801
„ „ „ „ whooping cough (first visits, 15) ... ..	37
„ „ „ „ pneumonia ... ..	719
„ „ „ „ infantile diarrhœa ... ..	301
Enquiries into deaths due to diarrhœa ... ..	295

450 children under five years of age were referred for special treatment to the school medical department as follows:—

Defective vision	...	...	...	...	323
Otorrhœa	...	...	...	...	14
Orthopædic defects	...	...	...	...	113

### Child Life Protection.

(a) Number of persons receiving children for reward on the Register at the end of the year 1946	...	...	...	41
(b) Number of children on the Register:—				
(1) at the end of the year 1946	...	...	...	50
(2) who died during the year (in homes)	...	...	...	nil
(3) „ „ „ „ „ (in hospitals)	...	...	...	nil
(c) Proceedings taken during the year	...	...	...	nil

### Care of Illegitimate Children.

According to information available, the number of illegitimate children born alive in Liverpool during 1946 was 1,351, giving a rate of 1·84.

During the year, the City Council authorised the payment of increased grants to the voluntary organisations undertaking work in connection with unmarried mothers and illegitimate children.

Careful watch is kept over all illegitimate children by the Maternity and Child Welfare Department, and co-operation between the staff of that Department and the various voluntary workers is very close. A live register of all illegitimate children enables this surveillance to be continuous.

### Neo-natal Mortality.

The number of neo-natal deaths amounted to 695, equal to a rate of 37·4 per thousand live births registered. Special enquiry was made into the deaths of all children who died within 28 days after birth.



### Premature Infants.

Special accommodation is provided for 34 premature infants born in Broadgreen, Smithdown Road and Walton Hospitals. They are also admitted to cubicles in Alder Hey Hospital. A further unit is in course of preparation at Mill Road Infirmary, and when this is ready for use, the accommodation in premature baby wards will be increased by 12 cots.

In addition to these arrangements, certain equipment is available for midwives in whose practices premature infants are born, in order to facilitate special care of such children at home.

It is hoped that when sufficient hospital accommodation has been provided, premature babies born in the district and requiring institutional treatment will be admitted. This will entail the provision of special transport arrangements.

On discharge from the municipal hospitals, information relating to the condition and feeding of premature children is forwarded to the Medical Officer of Health. This ensures an early visit to the home from a health visitor or midwife, whichever is more appropriate to individual needs, and continued care is given until the mother is able to look after the child herself.

Evidence points to maternal nutrition being an important factor in the causation of prematurity. With this in view, advice is tendered in the ante-natal clinics to expectant mothers on their feeding during pregnancy and every endeavour is made to get them to use the extra rations and vitamin preparations available for them.

### Dental Clinics.

Total attendances at the 6 clinics ...	1,739
New cases ... ..	1,174
Ante-natal and post-natal mothers ...	1,113
Children ... ..	61

### Day Nurseries.

The following nurseries were available for the children of women in employment or who, for domestic reasons, could not care for their children themselves:—

(1) *Full-time Nurseries for children aged 0-5 years—*

	Accommodation for
Banks Road Hut, Garston (19) ... ..	50 children
25, Derwent Road (13) ... ..	67 „
1, The Elms, Dingle (8) ... ..	36 „
18, Great George Square (1) ... ..	73 „
25, Grove Park, Lodge Lane (8) ... ..	58 „
12, Holly Road, Fairfield (7) ... ..	75 „
Mill Road Nurses' Home (6) ... ..	70 „
Orwell Road Hut, Kirkdale (4) ... ..	50 „
Salisbury Street Council School, Everton (3) ... ..	60 „
5/7, Swiss Road, Fairfield (6) ... ..	60 „
97/99, Upper Canning Street (8) ... ..	62 „
Wavertree Playground Hut (15) ... ..	50 „
262/264, Westminster Road, Kirkdale (4) ... ..	45 „

**Infestation by Head Lice.**

Since the receipt of Circular 2831, health visitors have given increased attention to infestation by head lice of children under the age of five years. Nursery Matrons and school nurses have been asked to refer to the health visitors those families from which lice-infested children have attended nurseries or schools.

It has always been the practice to examine children where the personal cleanliness of the family is in doubt, but it is not always easy to obtain the co-operation of the mother and older members of the family. Quite frequently mothers resent any examination being made of members of the family who are suspected of re-infesting the children who have been cleansed.

Between 1st January and 31st December, 1946, 307 children under the age of five years were found by the health visitors to be verminous. In all cases, advice was given as to cleanliness and 215 of the mothers (or guardians) agreed to carry out instructions as to disinfection. In 64 cases, however, they preferred to go to a cleansing station. In a few



instances, improvement was maintained, but a hard core is still unsatisfactory. This is a problem which has engaged the attention of health visitors and school nurses for many years, and the difficulties in dealing with people who have no desire to be clean are increased by war conditions, such as soap rationing, inability to renew clothing owing to shortage of coupons, and to the fact that many women are engaged in work, whilst at the same time endeavouring to carry on their home duties. In such families, the children are frequently not well cared for, especially in regard to personal hygiene.

The heads of 98 mothers were cleansed—87 at home and 11 at cleansing stations.

# TUBERCULOSIS.

## Notification.

Public Health (Tuberculosis) Regulations, 1930.

SUMMARY OF NOTIFICATIONS DURING THE PERIOD FROM THE 1ST JANUARY, 1946,  
TO 31ST DECEMBER, 1946.

TABLE I.

Age-periods.	Notifications on Schedule A.												Total Notifica- tions on Form A. (includ- ing dupli- cates.)
	Number of Primary Notifications of New Cases of Tuberculosis.												
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	Total Primary Notifica- tions.	
Pulmonary—													
Males .....	5	16	15	17	74	93	178	133	134	90	39	794	1,049
Females .....	2	12	14	17	109	153	188	86	51	40	12	684	835
Non-Pulmonary—													
Males .....	—	28	23	12	15	4	20	6	4	4	5	121	141
Females .....	2	10	23	14	15	12	26	7	6	1	—	116	138

Out of a total of 1,478 primary notifications of pulmonary tuberculosis 1,016 were received from private and 462 from hospital practitioners, whilst in the case of non-pulmonary tuberculosis these figures are 75 and 162 respectively, forming a total of 237.

The total number (1,478) of primary notifications of pulmonary tuberculosis remains high as compared with the pre-war figure. It is probable that this is largely due to the number of unsuspected cases now being brought to light by Mass-radiography and also to the increasing co-operation of medical practitioners. On the other hand, the continued fall in the pulmonary death rate is satisfactory and reflects the results of modern treatment when applied to an earlier and, therefore, more promising type of lesion.

In the case of non-pulmonary tuberculosis the number (237) of primary notification shows a steady decline over a period of years; despite the increased consumption of milk by children; a result, no doubt, of the reduction in bovine infection associated with the improved conditions under which milk is now supplied.



### The Notification and Dispensary Registers.

In Table II is shown the number of cases on the notification and dispensary registers at the end of the year, the difference (1,844) between the figures for the respective registers representing the number of patients who, for various reasons, discontinued public treatment under this authority before reaching the "cured" stage. A few notified cases are also included in which the patients have refused to make use of the treatment facilities available.

TABLE II

	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Totals.
	Males.	Females.	Males.	Females.	
Number of cases on the Notification Register ...	2,746	2,520	645	790	6,701
Number of established cases on the Dispensary Register	2,054	1,880	416	507	4,857
Difference ... ..	692	640	229	283	1,844

In Table III is given an analysis of the 1,844 persons whose names are on the notification register but are not on the dispensary register, according to the latest information concerning them.

TABLE III

Whereabouts Known.	Pulmonary Tuberculosis.						Non-Pulmonary Tuberculosis.						Totals.
	Males.			Females.			Males.			Females.			
	State of the Disease.						State of the Disease.						
	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	
Totals ... ..	28	224	440	24	186	430	32	120	77	37	148	98	1,844

### Tuberculosis Clinics and Dispensary System.

A statistical summary of the work of the Tuberculosis Clinics, so far as all cases on the dispensary registers are concerned, is given in Table IV, and in addition there are included a few statistics of a general nature.

TABLE IV.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY				TOTAL.				Gr To	
	Adults.		Children		Adults.		Children		Adults.		Children.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—NEW CASES examined during the year (excluding contacts):														
(a) Definitely tuberculous ...	604	524	34	27	58	68	53	53	662	592	87	80	1,4	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	27	17	16	21		
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	361	240	179	174	9	
B.—CONTACTS examined during the year :—														
(a) Definitely tuberculous ...	2	4	—	5	—	—	—	—	2	4	—	5		
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	—	—	—	—		
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	27	56	134	135	3	
C.—CASES written off the Dispensary Register as :—														
(a) Recovered ...	53	55	11	4	11	20	18	15	64	75	29	19	1	
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous) ...	—	—	—	—	—	—	—	—	388	296	313	309	1,2	
D.—NUMBER OF CASES on Dispensary Register on Dec. 31st 1946 :—														
(a) Definitely tuberculous ...	1,908	1,746	146	134	218	337	198	170	2,126	2,083	344	304	4,8	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	27	17	16	21		
1. Number of cases on Dispensary Register on January 1st, 1946 ...			4,638		2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years ...									
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of" ...			719		4. Cases written off during the year as Dead (all causes) ...									6
5. Number of attendances at the Clinics (including Contacts) ...			10,545		6. Number of Insured Persons under Domiciliary Treatment on the 31st December ...									1,1
7. Number of consultations with medical practitioners :— (a) Personal ... (b) Other ...			7 3,420*		8. Number of visits by Tuberculosis Officers to homes (including personal consultations) ...									4
9. Number of visits by Tuberculosis Visitors to homes of patients ...			16,301		10. Number of :— (a) Specimens of sputum, etc., examined (b) X-ray examinations made in connection with Dispensary work. ...									2,0 1,8
11. Number of "Recovered" cases restored to Dispensary Register, and included in A (a) and A (b) above... ..			14		12. Number of "T.B. plus" cases on Dispensary Register on December 31st ...									1,6

\* In addition to 3,427 consultations, 2,173 reports concerning patients were sent to medical practitioners.



TABLE V.

PATIENTS UNDER DISPENSARY TREATMENT AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.	
INSURED PERSONS	Males ... ..	—	—	—	1
	Females ... ..	1	—	1	
NON-INSURED PERSONS	Male Adults ... ..	—	—	—	19
	Female Adults ... ..	14	—	14	
	Male Children* ... ..	—	2	2	
	Female Children* ... ..	—	3	3	
TOTALS ...	... ..	15	5	20	

\* Under 15 years of age.

TABLE VI.

PATIENTS NOT NEEDING TREATMENT WHO WERE UNDER DISPENSARY  
SUPERVISION AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.	
INSURED PERSONS	Males ... ..	633	136	769	1473
	Females ... ..	558	151	709	
NON-INSURED PERSONS	Male Adults ... ..	81	26	107	939
	Female Adults ... ..	231	120	351	
	Male Children* ... ..	104	151	255	
	Female Children* ... ..	91	135	226	
TOTALS ...	... ..	1698	719	2417	

\* Under 15 years of age.

**Home Nursing.**

The domiciliary nursing of both pulmonary and non-pulmonary cases continues to be carried out by the Liverpool Queen Victoria District Nursing Association. During the year, 74 pulmonary and 43 non-pulmonary cases were nursed in their homes, and to these cases 4,087 visits were paid. The Garston and Grassendale Nursing Association and the Woolton and District Society have dealt with cases outside the area supplied by the District Nursing Association.

### General Remarks.

The city death rates for the year 1946 for pulmonary and non-pulmonary tuberculosis are 0·79 and 0·10 per 1,000 respectively, making a total of 0·89 per 1,000 for all forms of the disease; a figure identical with that of 1938, which was the lowest yet recorded for the city. An analysis of unnotified cases of tuberculosis is given in Table VIII.

The Tuberculosis Officers continue to carry out the examination of certain recruits to the Forces in accordance with the requirements of the National Service (Armed Forces) Act, 1939, and 168 reports have been submitted to the Ministry of Labour. A further 181 reports have been rendered in accordance with the requirements of the Public Health (Tuberculosis) Regulations, 1940 (Men), and 19 reports under the Public Health (Tuberculosis) Regulations, 1942 (Women).

The Ministry of Pensions was supplied with 287 reports in respect of pensioners about to undergo, or completing, courses of residential treatment and 393 reports were rendered in respect of cases due to appear before Medical Boards.

MILK. It was not found necessary during the year to take any action under the Public Health (Prevention of Tuberculosis Regulations) 1925, or Public Health Act, 1936, Section 172.

CONTACTS. The Tuberculosis Officers have examined 363 persons who were known to have been in contact with infectious cases of pulmonary tuberculosis and found evidence of disease in 11 or 3·03 per cent.

### Tuberculosis Welfare Department.

This Department is responsible for the assessment and distribution of financial allowances to patients suffering from Pulmonary Tuberculosis, whose cases fulfil the requirements laid down in Memorandum 263/T of the Ministry of Health. A summary of cases dealt with is given below :—

Total number of applications from 1st January to 31st	
December, 1946 ... ..	438
Number of above eligible for and granted allowances ...	307

Number of above ineligible for and not granted allowances—

(a) on medical grounds ... ..	26
(b) on grounds other than medical ... ..	105

Total amount of allowances paid in the above period—£23,471 17s. 11d.

REHABILITATION. With regard to this part of the scheme, the number of cases dealt with by the Tuberculosis Welfare Department has continued to increase during the past year and close co-operation between this department and the Rehabilitation Department of the Ministry of Labour has been maintained.

Summary of cases dealt with during the year ending 31st December, 1946:—

Total cases referred by Ministry of Labour to Tuberculosis Officer ... ..	295
(a) Examined and found fit for light, part-time or full-time employment ... ..	222
(b) Not fit for employment ... ..	44
(c) Failed to attend for examination ... ..	17
(d) Certified as non-tuberculous ... ..	12

Letters sent by Tuberculosis Welfare Officer to patients offering advice and assistance to obtain suitable employment ... ..	545
------------------------------------------------------------------------------------------------------------------------------	-----

Number availing themselves of this assistance and referred to Ministry of Labour ... ..	212
-----------------------------------------------------------------------------------------	-----

* Actual number of patients reported by Ministry of Labour as placed in employment ... ..	75
-------------------------------------------------------------------------------------------	----

* Number of cases who obtained employment themselves ...	28
----------------------------------------------------------	----

Total number of cases dealt with under Rehabilitation Scheme by Welfare Department ... ..	871
-------------------------------------------------------------------------------------------	-----

\* These figures may not give a full return of patients already employed, or of those who are placed in employment, because of a considerable number of them failing to reply to letters or inform the Welfare Officer as to their position. Furthermore, it is possible that the Ministry of Labour has not notified this department of all the cases referred to it who were actually found employment through the Scheme.



### **The Disabled Persons (Employment) Act, 1944.**

The number of tuberculous persons who have been placed in suitable employment since the passing of this Act remains limited. This is mainly due to the fact that the majority of employers are already employing more disabled persons than the quota of 3 per cent. now fixed by the Ministry of Labour, and also because, up to date, only two forms of employment have been designated under the provisions of Section IV of the Act. It has been possible to find employment for a number of suitable cases in the City Car Parks.

### **Mass Radiography Department.**

Although the standard of notification of Tuberculosis in Liverpool has generally been good it is, nevertheless, desirable to make every effort to raise this standard by detecting those cases where the disease is masked by other conditions or where, in the absence of pronounced symptoms, the real trouble is unsuspected.

With this object in view, medical practitioners in the city have been invited to avail themselves of facilities afforded by the Mass Radiography Department to aid them at arriving at a diagnosis in suspicious chest cases. In other words, a speedy and economic method of preliminary radiographic investigation has been placed at the doctors' disposal; easily initiated by the use of a very simple form, and allowing of a radiological report being available within the minimum of delay.

In this way a very considerable amount of tuberculosis has been brought to light which has been masquerading in the guise of Chronic Bronchitis, Asthma or other chest ailments.

The appended analysis shows the mass miniature radiographic findings in these cases as compared with routine "health survey" cases passing through the unit.

ANALYSIS OF WORK OF MASS RADIOGRAPHY DEPARTMENT FOR THE YEAR  
ENDING 31ST DECEMBER, 1946.

	Routine Cases		Doctors' cases		Totals		Grand Totals
	Male	Female	Male	Female	Routine Cases	Doctors' Cases	
Number of Miniature films taken ... ..	4,532	3,691	3,796	5,039	8,223	8,335	17,058
Abnormalities found :—							
Tuberculosis Active ...	12	36	131	148	48	279	327
Tuberculosis Inactive	115	52	147	184	167	331	498
Cardio vascular ...	16	12	12	43	28	55	83
Miscellaneous ...	119	51	415	291	170	706	876

NOTE.—As a full-time medical staff is not yet available the unit has not attained full output.

A further stimulus to early detection of tuberculosis was provided early in the year by the very helpful co-operation of the Liverpool Insurance Committee in arranging for the free distribution amongst practitioners in the city of a booklet entitled "Pulmonary Tuberculosis and the General Practitioner," compiled by the Tuberculosis Officer of Bermondsey, and giving valuable advice on the diagnosis of the disease in its early stages.

These two innovations have been most favourably received by the doctors generally and their value is reflected in an increase in the number of early cases coming under treatment with, of course, enhanced chances of recovery.

In his report for the year 1946, the Medical Superintendent of Cleaver Sanatorium, Heswall, comments upon the fact that the number of early cases admitted tends to increase yearly.

### Domiciliary Treatment.

At the end of the year, 1,524 patients remained under domiciliary treatment of whom 1,169 were persons insured under the National Health Insurance Act, and in receipt of treatment from their panel doctors and 355 were not insured and were under treatment of District Medical Officers or doctors of their own choice. The domiciliary reports received relating to insured persons numbered 385. Table VII shows the position at the end of the year.

TABLE VII.

PATIENTS UNDER DOMICILIARY TREATMENT AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.
INSURED PERSONS	Males ... ..	749	27	796
	Females ... ..	369	24	393
NON-INSURED PERSONS	Male Adults ...	86	6	92
	Female Adults ...	209	17	226
	Male Children*	10	11	21
	Female Children*	12	4	16
TOTALS ...	... ..	1435	89	1524

\* Under 15 years of age.

**Co-operation.**

During the year, 1,315 reports were rendered by the Tuberculosis Officers in respect of school children. Many cases have also been examined at the request of organisations such as the Liverpool Personal Service Society; Child Welfare Association; Maternity and Child Welfare Department, etc.

**Summary of Treatment, etc., carried out in Sanatoria in connection with the working of the Tuberculosis Scheme.**

Operations (Thoracic and other)...	698	Pneumoperitoneum (New Inductions ... ..)	109
Gold and other treatments ...	88	Pneumoperitoneum (Refills) ...	3,391
Light Therapy (Exposures) ...	3,562	*X-ray Examinations (Films) ...	10,630
Artificial Pneumothorax (New Inductions) ... ..	223	„ „ (Screenings)	20,280
Artificial Pneumothorax (Refills)	17,148	Dental Treatment (Extractions)...	394
		„ „ (Fillings) ...	354
		„ „ (Miscellaneous)	326

\* Includes cases referred by the Tuberculosis Clinics.

There has been a considerable increase in the amount of surgical work carried out at the Sanatoria and also in the number of radiological examinations. On the other hand, the number of cases treated by light-therapy has been considerably reduced by the use of "Calciferol" in the treatment of certain tuberculous conditions of the skin.

**Notification and Deaths.**

During the year 69 persons within the city died from tuberculosis without notification having been effected prior to death. The result of enquiry into the reasons for such failure to notify are summarised in Table VIII.



TABLE VIII.

DISEASE.	Reasons for Non-notification of Persons who died within the City.						
	No. of Persons who died within the City.	No. of Cases not notified before death.	Diagnosis made at a Post-mortem Examination. (Includes Coroner's Cases.)	Diagnosis delayed owing to Clinical difficulties.	Doctor thought case had been notified by another Practitioner.	Notification forgotten.	Patient died before notification could be effected.
Pulmonary Tuberculosis	579	42 7.24%	14 2.41%	7 1.21%	5 0.89%	7 1.21%	9 1.54%
Non-Pulmonary Tuberculosis .....	79	27 34.2%	4 5.07%	15 19%	2 2.53%	4 5.07%	2 2.53%

## Deaths from Tuberculosis.

The number of deaths from pulmonary and non-pulmonary tuberculosis in Liverpool from 1934 to 1946, together with the number of new cases notified and the death rates which prevailed in England and Wales are given in Tables IX and X where case rates for Liverpool are also shown.

TABLE IX.

## DEATHS FROM PULMONARY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1934.....	1,903	2.20	867	1.03	0.63
1935.....	1,697	1.96	812	0.97	0.60
1936.....	1,645	1.90	713	0.85	0.58
1937.....	1,555	1.79	684	0.82	0.58
1938.....	1,378	1.59	666	0.81	0.53
1939.....	1,213	1.47	647	0.81	0.54
1940.....	1,311	1.73	761	1.01	0.59
1941.....	1,302	1.90	699	1.02	0.60
1942.....	1,370	2.04	653	0.97	0.54
1943.....	1,479	2.23	670	1.01	0.56
1944.....	1,441	2.16	597	0.90	0.52
1945.....	1,455	2.13	605	0.88	0.52
1946.....	1,478	2.01	579	0.79	0.46

TABLE X.

## DEATHS FROM NON-PULMONARY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1934.....	585	0·67	129	0·15	0·13
1935.....	502	0·58	123	0·15	0·11
1936.....	445	0·51	126	0·15	0·11
1937.....	388	0·45	112	0·13	0·11
1938.....	386	0·45	103	0·12	0·10
1939.....	317	0·38	99	0·12	0·09
1940.....	274	0·36	122	0·16	0·11
1941.....	305	0·44	147	0·21	0·13
1942.....	348	0·52	124	0·18	0·11
1943.....	335	0·51	103	0·15	0·11
1944.....	250	0·37	82	0·12	0·10
1945.....	248	0·36	96	0·14	0·10
1946.....	237	0·32	79	0·10	0·08

TABLE XI.

## AGE PERIODS OF DEATHS FROM TUBERCULOSIS DURING 1946.

Age Periods.	PULMONARY.		NON-PULMONARY.	
	Males.	Females.	Males.	Females.
0—	3	1	2	5
1—	—	—	13	9
5—	1	—	8	6
10—	1	2	1	5
15—	6	29	6	2
20—	22	52	1	—
25—	62	66	4	1
35—	63	41	3	2
45—	88	17	4	—
55—	61	20	4	1
65—	37	7	—	1
TOTALS ...	344	235	46	32

## VENEREAL DISEASES.

The Clinics operated by the Corporation during 1946 were:—

Seamen's Dispensary—Males only.

Mill Road Infirmary—Females and infants..

Royal Infirmary—Males and Females.

Edge Lane Hospital—Females only.

The Seamen's Dispensary and the Royal Infirmary are open all day for treatment of these diseases in the male. At Mill Road Infirmary, the Royal Infirmary and Edge Lane Hospital treatment for females is provided each day at hours convenient to the greatest number of patients.

All cases of venereal diseases requiring in-patient treatment are now concentrated in the special wards at Belmont Road Hospital. Periodic examinations of the children born and apparently free from disease are arranged. Infected parents are encouraged to attend the clinics until cure is accomplished. Further pregnancies are supervised and prophylactic treatment for congenital syphilis is given throughout.

It is becoming increasingly realised that the infected unit is not the individual but the family and thus whole families are examined, and, if need be, treated as the result of one diagnosed case. The maternity wards in particular of the various hospitals have referred numerous cases to the clinics for treatment, while the ante-natal centres throughout the city have sent many patients for diagnosis and treatment.

An unadvertised clinic at the Royal Infirmary deals with many late cases and their families. The sources of supply are the general wards, the ophthalmic and aural departments of general hospitals and the special hospitals for diseases of the eye, ear and throat.

The employment of an almoner and one male and two female welfare officers has proved of great value in connexion with the operation of Regulation 33B and with the defaulting patients. Form I 33B was



responsible for the notification of 102 females and 3 males on one occasion only and of 13 females on two occasions. Of these, 51 females and 1 male were brought under observation.

The issue of contact slips to patients attending and whose contacts were known to them resulted in 252 females and 54 males being examined.

During the year research on the treatment of syphilis by penicillin has been continued.

The following table summarises the work of the Clinic for the year 1946.

	Seamen's Dis- pensary. Males only.	†Royal Infirmary.		Mill Road Infirmary and †Belmont Road Hospital.		†Edge Lane Medical Home. Females only.	TOTAL. Males and Females.
		Males.	Females.	Males.	Females.		
New cases ... ..	6,317	2,696	914	3	895	62	10,887
Old and new patients							
Total attendances	33,387	19,983	13,841	345	12,775	59	80,390
In-patient days ...	—	342	51	7,152	5,639	2,539	15,723

†Beds for In-patients are reserved at these Institutions..

There was an increase in the number of new cases and in the number of attendances but a decrease in in-patient days of treatment.

Of late years, early syphilis has increased in both sexes but most strikingly in the female population:—

1940.		1941.		1942.		1943.		1944.		1945.		1946.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
354	59	584	139	567	260	507	279	417	278	509	315	655	331

## SCABIES.

The Scabies Order, 1941, under the Emergency Powers (Defence) Regulations gives the Medical Officer of Health, where he is satisfied, upon information given, that a person is in a verminous condition, power to cause such a person to be medically examined in suitable premises and further give him or her notice that he must present himself at a place where suitable arrangements have been made for him or her to be disinfected.

The treatment of scabies consists in giving the patient a hot bath, applying a suitable remedy, such as a 25 per cent. emulsion of benzyl benzoate and disinfection of clothing.

At the close of 1941 scabies was becoming widely prevalent. There were then 4 cleansing stations available for the treatment of scabies. During 1941-42 the number of centres was raised to 14. As the result of this provision and the consequent improvement in the general situation the number of units has been reduced to seven and will be further reduced to 4 as a result of the return of the South Tuberculosis Dispensary to its proper use. The existing units are:—

(1) Stalisfield Avenue, Norris Green	...	...	2 Baths
(2) Carnegie Welfare Centre	...	...	2 „
(3) Alder Hey Hospital	...	...	3 „
(4) 50, Eldon Place	...	...	1 Bath
(5) South Tuberculosis Dispensary, Park Road	...	...	3 Baths
(6) 71, Everton Road	...	...	4 „
(7) Clifton Street, Garston	...	...	2 „

The total number of baths thus provided is 17, against 31 in 1944.

The total number of cases of scabies thus dealt with in 1946 was about 2,000 as against 10,090 in 1944 and 15,845 in 1943. The new cases now average 40 per week as against 104 per week in 1944 and 260 in 1943. The contacts of school children are followed up and adult or pre-school cases brought to light received treatment. It will be seen that these methods have been successful in combating the epidemic which seemed so formidable in 1942. The number of sessions held in the remaining clinics have been reduced proportionally to the reduced incidence.

## INFECTIOUS HOSPITALS and SANATORIA.

During 1946 the hospital accommodation for infectious cases was as follows:—

City Hospitals North (182 beds), South (96 beds), East (178 beds), Fazakerley (118 beds), Fazakerley Annexe (149 beds), total 732 beds. Fazakerley Sanatorium and Annexe (447 beds), Cleaver Sanatorium 225 beds, total, 672 beds.

The following tables, prepared by the medical staff of each of the city hospitals, show the number of patients admitted, the nature of the illness in each case and the results of treatment, during the year 1946:—

DISEASES	Remaining Dec. 31st, 1945.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged.	Remaining at end of year.	Died within 48 hours of Admission.
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### Cit. Hospital North, Netherfield Road.

Scarlet Fever ...	29	265	1	295	—	5	257	33	—
Diphtheria ...	50	147	—	197	—	7	163	23	1
Other Diseases ...	22	529	8	559	—	16	531	10	1
<b>Totals ...</b>	<b>101</b>	<b>941</b>	<b>9</b>	<b>1051</b>	<b>—</b>	<b>28</b>	<b>951</b>	<b>66</b>	<b>2</b>

### City Hospital South, Grafton Street.

Scarlet fever ...	36	344	—	380	—	5	327	48	—
Measles ...	—	19	—	19	—	1	17	1	—
Whooping Cough ...	—	33	4	37	—	—	28	8	—
Other Diseases ...	—	17	—	17	—	—	17	—	—
<b>Totals ...</b>	<b>36</b>	<b>413</b>	<b>4</b>	<b>453</b>	<b>—</b>	<b>6</b>	<b>389</b>	<b>57</b>	<b>—</b>



DETAILS OF ADMISSIONS, DISCHARGES, ETC., AND WORK UNDERTAKEN AT THE MUNICIPAL HOSPITALS FOR PERIOD 1942 to 1946.

	WALTON HOSPITAL					SMITHDOWN ROAD HOSPITAL					MILL ROAD INFIRMARY					ALDER HEY HOSPITAL					BROADGREEN EMERGENCY HOSPITAL					BELMONT ROAD EMERGENCY HOSPITAL				
	1942	1943	1944	1945	1946	1942	1943	1944	1945	1946	1942	1943	1944	1945	1946	1942	1943	1944	1945	1946	1942	1943	1944	1945	1946	1942	1943	1944	1945	1946
*Admissions ...	17,090	16,390	16,406	14,870	15,836	7,907	8,223	8,292	9,725	10,579	—	—	—	—	720	8,251	8,371	9,139	8,409	8,156	3,482	7,368	9,652	9,425	9,815	8,643	7,371	8,411	8,614	7,929
*Transferred to ...	181	84	206	153	155	68	78	101	136	110	—	—	—	—	7	91	77	96	99	148	48	148	74	72	31	493	649	765	645	579
*Born ...	3,258	3,602	3,486	3,069	3,712	1,892	2,046	2,068	2,190	2,631	—	—	—	—	590	—	—	—	—	—	—	267	1,736	2,031	2,535	—	—	—	—	—
*Discharged ...	18,588	18,399	18,698	16,816	18,503	8,473	8,775	9,181	10,799	12,176	—	—	—	—	1,142	7,475	7,651	8,182	8,126	7,654	3,108	7,158	10,756	10,926	11,831	7,179	5,859	6,291	6,488	5,953
*Transferred from ...	334	286	275	246	209	541	614	603	469	485	—	—	—	—	10	242	344	431	251	309	20	95	221	160	132	643	638	927	790	902
*Died ...	1,540	1,477	1,165	1,059	1,149	835	934	660	637	703	—	—	—	—	17	463	487	347	434	495	231	383	364	384	506	1,467	1,446	1,902	1,976	1,829
Surgical Operations ...	6,432	6,119	6,476	6,175	5,541	2,991	3,019	2,736	2,965	3,440	—	—	—	—	253	2,520	2,239	3,075	3,005	3,466	2,242	3,406	4,177	4,627	5,836	—	—	—	—	—
Out-Patient Attendances ...	79,991	82,070	84,474	77,784	82,791	42,022	48,248	48,664	49,962	48,770	41,344	76,338	77,514	73,379	74,911	41,081	47,593	45,265	50,182	39,420	8,290	20,991	33,262	39,488	53,411	27,871	28,612	31,083	37,193	42,873
Pathological Examinations ...	30,697	28,895	26,191	25,513	32,774	52,639	53,225	57,290	45,631	45,443	—	—	—	—	9,411	21,643	19,861	17,274	19,703	22,928	10,203	14,677	19,132	16,482	23,993	—	—	—	7,506	7,795
Post-mortems ...	930	890	708	735	803	195	215	210	122	235	—	—	—	—	—	107	130	131	151	185	42	95	89	98	170	—	—	—	25	72
X-Ray Examinations (Radiographs) ...	22,463	23,528	26,752	28,231	36,128	11,455	14,823	16,126	17,110	17,987	—	—	—	—	2,291	13,361	15,382	17,220	18,452	17,869	8,124	19,694	27,467	32,241	37,908	—	—	—	—	—

\*These figures correspond with the returns to the Ministry of Health and are made up to the last week-end of each year. This accounts for the slight variation between the figures returned by the respective Hospitals which are for the actual Calendar year.

NOTE.—Mill Road Infirmary statistics compiled from date of re-opening, viz. :—1,10,46, with the exception of O.P. attendances which are for the full years 1942-1946.



## DISEASES.

Remaining  
Dec. 31st, 1945.Admitted  
during the  
year.Transferred  
from other  
City Hospitals.Total under  
Treatment  
during the year.Transferred  
to Convalescent  
Hospital.Transferred  
to other City  
Hospitals.

Discharged

Remaining  
at end of year.Died within  
48 hours of  
Admission.

Total Deaths

## City Hospital East, Mill Lane, Old Swan

Scarlet Fever	...	...	58	202	4	264	—	1	236	27	—	—
Measles	...	...	2	206	24	232	—	9	218	—	1	5
Diphtheria	...	...	48	129	18	195	—	—	171	22	1	2
Other Diseases	...	...	24	438	21	483	—	3	424	47	3	9
Totals	...	...	132	975	67	1174	—	13	1049	96	5	16

## City Hospitals, Fazakerley.

Scarlet fever	...	...	39	242	34	315	—	20	263	32	—	—
Enteric fever group	...	...	4	5	4	13	—	—	13	—	—	—
Diphtheria	...	...	45	183	43	271	—	24	194	32	7	21
Measles	...	...	13	190	42	245	—	23	209	11	2	2
Whooping Cough	...	...	2	168	45	215	—	14	146	43	9	12
Other diseases	...	...	105	903	189	1197	—	88	1044	48	11	17
Totals	...	...	208	1691	357	2256	—	169	1869	166	29	52

## Fazakerley Sanatorium.

Tuberculosis	...	...	380	242	200	822	—	61	274	388	—	99
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## Cleaver Sanatorium.

Tuberculosis	...	...	207	180	64	451	—	44	167	199	—	41
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## Totals—All Isolation Hospitals and Sanatoria.

All Diseases	...	...	1064	4442	701	6207	—	321	4699	972	36	215
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# General and Children's Hospitals and other Institutions. Statement of Admissions, Discharges, Births, Deaths, and Transfers.

Hospital or Establishment.	Remaining 29/12/45	Admitted.	Trans- ferred to	Born.	Dis- charged.	Trans- ferred from	Died.	Remaining 28/12/46
<b>Administered under the Poor Law Acts :—</b>								
Belmont Road Institution ...	1,595	7,929	579	—	5,953	902	1,829	1,419
Kirkdale Homes ...	1,274	433	581	—	493	127	276	1,392
Olive Mount Children's Hospital ...	420	1,758	471	—	1,856	379	28	386
Cottage Homes, Fazakerley ...	386	122	209	—	236	67	—	414
Shaw Street Boys' Home ...	37	36	6	—	39	—	—	40
Seafield House (Greaves Hall) ...	93	8	2	—	15	4	—	84
<b>Administered under the Public Health Act :—</b>								
Walton Hospital ...	1,131	15,836	155	3,712	18,503	209	1,149	973
Alder Hey Hospital ...	800	8,156	148	—	7,654	309	495	646
Smithdown Road Hospital ...	776	10,579	110	2,631	12,176	485	703	732
Broadgreen Emergency Hospital ...	618	9,815	31	2,535	11,831	132	506	530
*Mill Road Infirmary ...	—	720	7	590	1,042	10	17	148
<b>TOTAL ...</b>	<b>7,130</b>	<b>55,392</b>	<b>2,299</b>	<b>9,468</b>	<b>59,898</b>	<b>2,624</b>	<b>5,003</b>	<b>6,764</b>

\* From week ended 5.10.1946.

NOTE.—Emergency Medical Service cases are included in above Return.

## MUNICIPAL HOSPITALS and INSTITUTIONS.

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### General Review of Hospital Services.

With the termination of hostilities the services provided under the E.M.S. Scheme steadily diminished and the occupancy of the hospitals by service cases became correspondingly less. The principal special units, including orthopaedic and nerve injury at Alder Hey, thoracic and facio-maxillary at Broadgreen, dermatology at Belmont Road, and tropical diseases at Smithdown Road continued to operate, though increasingly civilian in occupation, and in most cases on a diminishing scale. Arrangements were made for the transference of the neuro-surgical unit from Winwick Emergency Unit to the Walton Hospital and for the opening of a small rheumatism investigation unit at Broadgreen.

The outstanding event of the year was the operation of the medical rehabilitation scheme in co-operation with the University. This scheme provided for an increase in the junior medical staffs, of resident and registrar status, the expenses being borne by the University and the City in agreed proportions and, in the case of fully created posts, entirely by the University. The posts of registrar status were confined to those medical officers, often of considerable war-time experience and corresponding rank, who desired to take higher qualifications in medicine, surgery or obstetrics. The medical staffing of the municipal hospitals was thereby markedly enhanced, and this was improved also by the operation of the E.M.S. Scheme with its attached specialist staffs.

The second World War was followed, as was the first, by a great rise in the birth-rate, always higher in Liverpool and vicinity than in the country as a whole. As reported in regard to the year 1945, provision was made in the estimates for the opening of two ward blocks at Mill Road Infirmary for maternity purposes and for the closure of the Southport evacuation units. The Mill Road unit was brought into operation on October 1st with two lying-in wards, a further pair of wards being opened early in 1947. The weekly average birth-rate rose to 31.1 in the third quarter of 1946 and a further considerable rise in 1947. It was fortunate, therefore, that preparations had been made in

advance. The unit was formally opened by the Lord Mayor on 5th June, 1947. The unit now contains 7 labour cubicles, 12 ante-natal beds, 98 lying-in beds, 8 isolation cubicles and accommodation for premature babies. The rehabilitation of "A" Block is now under consideration. The Mill Road Maternity Unit is run in conjunction with the Obstetric Department of the University, Professor Jeffcoate and his Assistant being members of the staff. This is an admirable example of co-operation between a municipal hospital and the teaching department of the University.

The number of live births in the municipal hospitals during the year was 9,496, and there were 320 still-births, giving a total of 9,816. This total includes the births of children whose mothers reside outside Liverpool in the user agreement area. Of these births 620 live and 20 still-births took place in Mill Road Infirmary in the last quarter of the year. The work of the maternity units during the year ended 31st December, 1946, is shown in the following tables:—

Hospital.	Live Births.		
	1944.	1945.	1946.
Walton ... ..	3,459	3,197	3,721
Smithdown Road ... ..	2,061	2,205	2,640
Broadgreen ... ..	1,722	2,073	2,515
Mill Road ... ..	—	—	620*
Totals ... ..	7,242	7,475	9,496

\* Mill Road Infirmary re-opened 1st October, 1946.

Hospital.	Live Births.	Still Births.	Total.
Walton ... ..	3,721	154	3,875
Smithdown Road ... ..	2,640	88	2,728
Broadgreen ... ..	2,515	58	2,573
Mill Road ... ..	620	20	640
Totals ... ..	9,496	320	9,816

Great difficulties are experienced in getting new building work constructed and even in minor alterations and improvements to existing structures owing to controls and shortage of materials. Nevertheless certain works have been effected apart from the renovation and internal reconstruction carried out at Mill Road Infirmary.



- (a) At Walton, the building formerly used as a Creche has been converted into residential accommodation for medical officers.
- (b) The former Master's house has been converted into (i) a ground floor flat for the Matron, and (ii) resident accommodation for women doctors.
- (c) A flat has been made for a married senior resident medical officer in the main building.
- (d) Office accommodation has been provided for the Medical Superintendent and other medical staff.
- (e) Similar accommodation has been extended for the Matron.
- (f) A staff canteen has been provided in the former tailor's shop.
- (g) Some re-organisation of the pharmacy has provided a sterile fluids department and a galenical preparation room.

All the above are in Walton Hospital.

- (h) At Smithdown Road Hospital a ground floor ward in the Maternity Unit has been provided with 5 cubicles and adjacent steriliser room and kitchenette for isolation purposes. A small annexe has been built for sorting soiled linen.
- (i) At Smithdown Road the remainder of the top floor of the Administrative Block has been converted into accommodation for resident medical officers.
- (j) At Broadgreen Hospital an extension of the laboratory into adjacent storage room, etc., was effected.
- (k) At Belmont Road the former tramp rooms in "M" Block were converted to a pharmacy. The corridors used as the control centre during the war were re-converted into accommodation for the male inmates.
- (l) At Belmont Road hacking and plastering with provision of bathrooms and sluices has been carried out in "A," "B" and "F" Blocks and the Ground Floor of "M" Block.
- (m) At Kirkdale Homes hacking and plastering has been carried out in two Female Chronic Sick Wards and the old ladies' dining hall.

- (n) At City Hospital East half of Wards "F" and "G" have been cubicalised forming 8 cubicles and a steriliser room in each ward for the isolation of suspected diphtheria patients. Additional heating and hot water provision is in progress.

**TUBERCULOSIS.** Adult cases of tuberculosis were admitted mainly to the Sanatoria at Fazakerley and Heswall and to the tuberculosis unit at Walton Hospital. Cases of tuberculosis in children were admitted to the William and John Jones Convalescent Home, Rhyl. Two wards at Broadgreen Hospital were available for the reception of cases of tuberculosis, and temporary accommodation was occasionally provided at Belmont Road Emergency Hospital. Nevertheless the loss of beds by the change of user of Broadgreen Sanatorium exercised a cumulative effect and two wards at Sparrow Hall were converted to Sanatorium use and came into occupation early in 1944 and a third in 1945. Some cases for thoracic surgery were admitted to Broadgreen Thoracic Surgery Unit, most of the remainder receiving such treatment in Fazakerley Sanatorium and the remainder in Cleaver Sanatorium.

**INFECTIOUS DISEASES.** Diphtheria continued to be the most pressing problem although the numbers of cases again showed an additional decline in comparison with 1943. Measles were becoming prevalent in the fourth quarter of the year. Provision was made for the admission of cases of minor infections such as mumps, chickenpox and rubella among service units and from on shipboard.

## **SANITARY ADMINISTRATION.**

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During the year, sanitary inspectors made 165,590 inspections and visits for the investigation and abatement of nuisances. 37,029 complaints of nuisances were received as compared with 28,318 the previous year. The total number of nuisances reported was 58,182. The number of notices served for the abatement of nuisances was 26,614 informal, and 11,656 statutory, 1,773 of these being served for the provision of dustbins. In 489 cases legal proceedings were instituted for failure to comply with notices served under the Public Health Act, 1936, etc.

### **Departmental References.**

The co-operation which the Public Health Department receives from other Corporation departments is fully appreciated, as many sanitary defects are brought to notice and dealt with immediately. The number of references so received was 6,588, whilst the number of references to other departments was 7,773.

### **Infected Houses.**

The sanitary inspectors made 8,426 investigations relating to cases of infectious disease, involving 10,528 visits to infected houses, and 1,047 visits to phthisis cases, also 7,438 inquiries relating to suspected smallpox contacts.

### **Closet Accommodation.**

There still remain 95 privies and 75 pails on farms and outlying houses in the city where sewers are not reasonably available.

### **Drain Testing.**

1,511 drainage systems were tested, 167 by colour test, of which 88 were positive and 79 negative; 267 by smoke rocket test, of which 80 were positive and 187 negative; 1,077 by smoke machine test, of which 592 were positive and 485 negative. In some cases the assistance of the City Engineer's Department has been utilised. Where defects have been revealed by these tests, repairs were carried out.

### **Factories and Workplaces Inspection.**

#### **Factories Act, 1937, and Public Health Act, 1936.**

All factories and workplaces are visited by inspectors appointed under the Act, the various premises being grouped in districts so as to secure the maximum number of visits in the minimum time.



### Register of Factories, Section 8 (3).

The total number of factories (including bakehouses) on the register was 4,983, viz. :—

With mechanical power	...	...	2,571
Without mechanical power	...	...	2,362

#### 1. INSPECTIONS for purposes of provisions as to health.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Occupiers Prosecuted. (4)
Factories with mechanical power	4,396	320	Nil
Factories without mechanical power	2,613	201	Nil
Other Premises under the Act (including works of building and engineering construction, but not including outworkers' premises)	33	3	Nil
TOTAL	7,042	524	Nil

#### 2. DEFECTS found—

Particulars. (1)	Number of Defects.			Number of defects in respect of which prosecutions were instituted. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
Want of Cleanliness	44	44	Nil	Nil
Overcrowding	Nil	Nil	Nil	Nil
Unreasonable Temperature	2	2	Nil	Nil
Inadequate Ventilation	12	12	Nil	Nil
Ineffective drainage of floors	1	1	1	Nil
Sanitary Conveniences—				
Insufficient	54	36	Nil	Nil
Unsuitable or defective	563	512	Nil	Nil
Not separate for sexes	357	288	4	Nil
TOTAL	1,029	895	5	Nil

### Register of Workplaces (including Offices).

The number of workplaces on the register was 3,260. 1,807 visits were made to workplaces, and 1,804 in respect of offices. There were 346 defects, 194 of which were unsuitable or defective sanitary conveniences, 59 inadequate ventilation, and the remainder want of cleanliness, the defects not remedied at the end of the year being 21.

### Outworkers. Factories Act, 1937, Sections 110 and 111.

171 visits were made to premises and no instance of employment in unwholesome premises was found.

### Rag Flock Acts, 1911 and 1928.

Three visits to one factory in which rag flock is manufactured and 33 visits to premises where rag flock was used, were made, 38 samples of rag flock being taken.

The reports of the City Analyst on the 38 samples of rag flock submitted for analysis used in upholstery and bedding were as follows:—

14 contained				5 and under 10 parts of chlorine per 100,000 parts of flock.			
10	„	10	„	15	„	„	„
3	„	15	„	20	„	„	„
3	„	20	„	30	„	„	„
8	„			over 30	„	„	„

In 5 cases the offender was cautioned for using rag flock which was not in accordance with the requirements of the Act. Three summonses were served on three bedding manufacturers who issued summonses against the suppliers and proveyd warranty. One supplier who supplied two bedding manufacturers was fined £2 and paid 10 guineas costs to the manufacturers, and 6 guineas costs to the Corporation. In the case of the third summons the supplier was discharged, no costs or order being made.

### Bakehouses.

The number of bakehouses in use at the end of the year was 347, of which 107 were without mechanical power, 13 of these being basement, and 240 with mechanical power, of which 27 were basement bakehouses.

1,437 visits were made to bakehouses, 173 informal notices and 96 statutory notices were issued in respect of want of cleanliness, all of which were complied with.

### **Restaurants and Café Kitchens.**

All kitchens in connection with cafés and restaurants are regularly visited, particular attention being paid to the cleanliness of the premises and of the workers employed in the kitchens. There were 377 in use at the end of the year, 2,901 visits were made to restaurant and café kitchens, 100 informal and 358 statutory notices being issued in respect of want of cleanliness, unsuitable or defective sanitary conveniences, accumulation or deposit of refuse in rooms, the defects not remedied at the end of the year being 1,609.

### **Licensed Premises.**

2,417 visits were made to licensed premises. Measures have been taken to maintain a good standard of cleanliness. 265 statutory notices were issued, and with the exception of premises requiring structural alteration, the carrying out of which has been retarded owing to the shortage of labour and materials, the remaining defects were remedied.

### **Offensive Trades.**

There were on the register of offensive trades at the end of the year 73 businesses, and 386 visits were made to these premises.

### **Fish Friers' Premises.**

At the end of the year there were 404 fish friers' premises within the city, and 1,547 visits were made.

### **Furniture Removers.**

136 visits were made to the premises of furniture removers and 47 vans were inspected and found in a clean condition.

### **Employment Agencies.**

These premises are controlled by byelaws made under the Liverpool Corporation Act, 1927, and visits are made from time to time to ascertain that the requirements of the byelaws are being carried out. There are at present 25 licensed employment agencies on the register.



### **Railway Carriages and Fish Arrivals.**

During the year 493 visits were made to the railway station platforms within the city to ascertain if the railway carriages and fish arrival platforms were in a clean condition. All were found to be clean.

### **Shops Acts, 1912 to 1938, and**

### **Young Persons (Employment) Act, 1938, Part I.**

Inspection of shops and other premises throughout the City, affected by the provisions of the above Acts, has been carried out by Shops Inspectors, who have also applied to shops the appropriate provisions of the Public Health Act, 1936, the Food and Drugs Act, 1938, and the Rats and Mice (Destruction) Act, 1919.

Routine inspection of shops, which has been carried out as far as possible, has resulted in further improvement in the conditions affecting the welfare of shop workers, including facilities for the maintenance of health and comfort, the repair of structural defects and the cleansing of shop premises.

Progress in such matters is still greatly impeded owing to the continued shortage of labour and materials, although owners and occupiers are willing to carry out necessary improvements. Particular attention has been given to the cleansing of shop premises, which, together with the restoration of full lighting from repaired shop windows previously damaged or obscured has greatly improved the condition and appearance of many shops. It is of interest to note that numerous shops which for various reasons were vacated during war-time, including some damaged by enemy action, have been re-opened for business, and in addition to any shopping advantage for the convenience of the general public, the occupation of such premises has contributed to a more satisfactory appearance of various thoroughfares in the City.

Shopkeepers generally have complied with the various provisions of the Shops Acts, including holidays and intervals for meals for shop assistants, and hours of employment of young persons, and closing hours, and they have readily accepted the guidance of shop inspectors in these matters.

In accordance with the requirements of the Public Health Act, 1936, Section 205, enquiries have been made by a female shops inspector, with reference to the employment of women after child-birth, and in this connection 216 visits were made to factories within the city to ensure that the appropriate requirements of the Act are complied with. The total number of visits to shops was 56,430, and 38 special complaints were investigated under the various enactments. The number of shops registered was 2,549.

In connection with the closing of shops on the weekly half-holiday, 36,087 visits were made, whilst the visits on Sunday amounted to 3,106. Re-visits in connection with contraventions numbered 3,359, calls incidental to the Shops Acts were 5,173, including premises visited respecting matters dealt with under the Public Health Act, Food and Drugs Act, the Rats and Mice (Destruction) Act. 65 informations for contraventions of the Shops Acts were laid and the defendants convicted; the fines amounted to £94 15s. 0d. and £1 17s. 0d. costs. Warning letters were sent in 311 instances regarding minor offences. For the purposes of the Young Persons (Employment) Act, 1938, Part I, 63 visits were made to premises other than shops, the hours of young persons in the employments to which the Act relates, were found to be satisfactory, and no contraventions were reported.

### **Theatres, Cinemas, etc.**

696 visits were made by the Shops Inspectors, and in 14 cases minor defects observed, these being remedied on the attention of the managers being called thereto.

### **Common Lodging Houses.**

At the commencement of the year 1946, there were on the register 19 Lodging Houses providing accommodation for 1,177 lodgers.

19 applications were received from persons for the renewal of registration as keepers, which were granted for a further period of twelve months.

At the end of the year, there were on the register 19 lodging houses providing accommodation for 1,185 lodgers, 16 houses with accommodation for 1,051 males and three houses with accommodation for 134 females.

The number of inspections of these houses was 635. In 22 cases informal action was taken for infringements of the byelaws, and in 20 cases the requirements were complied with. 481 statutory nuisances were found upon inspection of the lodging houses, and of this number 433 were abated.

### **Houses Let-in-Lodgings.**

During the year, 4,536 inspections were made of houses occupied by members of more than one family. Offences were observed in 91 houses due to dirty floors, walls and ceilings, yards and water-closets, stairs and passages not washed, and beds, bedclothes and bedding dirty or verminous. Informal action was taken in 40 cases, and of this number all cases were abated. Formal action was taken in 51 cases and these were later complied with.

### **Seamen's Lodging Houses.**

At the commencement of the year there were 82 Seamen's Lodging Houses on the register, 2 applications were received from persons for Licences to keep a Seamen's Lodging House, and schedules of work necessary to be carried out in order to comply with the byelaws have been sent to the keepers concerned. The keepers of 24 Seamen's Lodging Houses have been licenced, and applications were received for renewal of 14 licences, which were granted.

The number of contraventions of the byelaws totalled 891. Of this number 485 were remedied, and in the majority of the other cases the works are in progress or are about to be commenced. The number of inspections of these houses was 1,831. 50 houses have ceased to be used as seamen's lodging houses, including 10 lodging houses which were closed owing to the repatriation of Chinese seamen. At the end of the year there were 32 Seamen's Lodging Houses on the register.

### **The Scabies Order, 1941.**

COMMON LODGING HOUSES.—635 inspections of 19 Common Lodging Houses were made under the above Order. Body lice were found in 3 beds and bedding from 3 houses and 3 beds were destroyed. Four persons said to have occupied the verminous beds were advised to attend hospital for treatment and cleansing, and 4 attended.



SEAMEN'S LODGING HOUSES. 1,831 inspections were made of 136 Seamen's Lodging Houses under the above Order. The bed bug was found in one lodging house, and in one bed. The bed was disinfested by the keeper concerned. All beds inspected were found to be free from body lice.

### **Canal Boats.**

Four new boats were registered, making a total of 402 canal boats on the register at the end of the year, with a population of 317 males. The number of inspections of these boats was 1,985, 56 contraventions were found on 36 boats, and of this number 56 contraventions were remedied. 36 notices were issued to owners.

### **The Hydrogen Cyanide (Fumigation) Act, 1937.**

Official notice has been received in respect of 13 fumigations under the Hydrogen Cyanide (Fumigation) Act, 1937. 5 dwelling-houses and 8 warehouses were satisfactorily fumigated under the supervision of the sanitary inspectors.

### **Miscellaneous.**

Stables within the city are systematically visited by the district sanitary inspectors, constant attention being paid to the frequent removal of manure and to general sanitation. The total number of visits to stables during the year was 3,598, the number occupied was 396, and the number disused was 722. 40 visits were made to manure depots.

MARINE STORES. During the year 36 visits were paid to 7 marine stores, and in 9 cases nuisances were found and the necessary steps taken for their abatement.

PARKS. Fortnightly visits are paid to all public sanitary conveniences within parks and gardens throughout the city to ascertain if they are kept in a clean condition and in good repair. 221 visits were paid and in 15 instances they were found to be incorrect. The necessary action was taken to remedy the defects.

POULTRY DEPOTS. 28 poultry depots were visited fortnightly, and in two instances they were found to be in an unclean condition. The necessary steps were immediately taken by the occupiers to cleanse the premises.

SCHOOLS. 1,466 visits were made to all schools, and in 63 instances defects were found. The necessary steps were immediately taken to have the defects remedied.

### **Court and Alley Inspections.**

500 inspections were made of courts and alleys, and 1,005 inspections of water-closets used in common, the visits being made weekly by sanitary inspectors to ascertain whether these common water-closets are kept in a clean condition.

### **Prohibition of Sale of Verminous Furniture, etc.**

686 visits have been paid to premises, and no infringements were observed.

### **Removal of Remains.**

Under the terms of licences issued from the Home Office, sanitary inspectors supervised the exhumation and re-interment of 20 bodies during the year.

### **Rats and Mice (Destruction) Act, 1919.**

#### **The Infestation Order, 1943, S.R. & O. 680.**

During the year the Sanitary Inspectors and rodent exterminators made 141,977 visits to buildings and lands to ascertain if they were infested by rodents; 2,590 buildings or lands were found to be infested by rats or mice, and 346 notices were served upon the persons responsible under the above-mentioned Act and Order.

17,897 rats were collected; of this number 12,746 were caught in traps and 5,151 dead rats were collected as the result of poisoning operations. 14,221 rats were brown and 3,676 black. 1,088 rats and 2 mice were examined by the City Bacteriologist and found to be free from plague, and the remainder were burnt. 4,960 mice were caught and of this number 2 were examined by the City Bacteriologist and the remainder were burnt.

Disinfestation of rodent-infested lands and buildings by the use of poisons, in accordance with the recommendation of the Infestation Division of the Ministry of Food, was commenced by this department on the 4th October, 1943, and is proceeding with satisfactory results. It is

estimated, using the formula employed by the Ministry of Food for calculating the "kill"; that a total of 25,648 rats were destroyed during the year by the use of poisons within buildings and lands.

The total number of rats destroyed by trapping and poisoning during the year is calculated to be 38,394. This total does not include rats destroyed in sewers as the result of poisoning operations carried out by the City Engineer and Surveyor's Department.

Table No. 1 indicates the number and species of rats and mice collected as the result of trapping and poisoning, and the number examined during the year 1946. Table No. 2 indicates the number of buildings and lands disinfested from rats and mice during the year. Table No. 3 indicates the total poison baits, in ounces, consumed by rodents within infested buildings and lands and the estimated number of rats destroyed by poisoning, and Table No. 4 indicates the total rats destroyed by trapping and poisoning during the year 1946.

TABLE No. 1.

NUMBER AND SPECIES OF RATS AND MICE COLLECTED, EXAMINED AND DESTROYED IN THE CITY OF LIVERPOOL DURING THE YEAR 1946.

	Buildings and Lands.			Sewers.		Total Examined.		Total Burnt.		Total Rats.
	Rats Black.	Rats Brown.	Mice.	Rats Black.	Rats Brown.	Rats.	Mice.	Rats.	Mice.	
January .....	235	558	338	—	644	108	—	1,329	338	1,437
February .....	184	312	627	—	612	88	—	1,020	627	1,108
March .....	249	576	565	—	671	104	—	1,392	565	1,496
April .....	259	390	467	—	628	75	—	1,202	467	1,277
May .....	299	421	380	—	696	95	—	1,320	380	1,416
June .....	256	615	370	—	600	82	—	1,389	370	1,471
July .....	264	821	444	—	710	85	—	1,710	444	1,795
August .....	266	603	408	—	560	83	—	1,346	408	1,429
September ...	732	1016	354	—	637	108	2	2,277	352	2,385
October .....	340	525	332	—	682	82	—	1,465	332	1,547
November .....	325	432	389	—	646	90	—	1,304	389	1,394
December .....	267	314	286	—	561	88	—	1,054	286	1,142
Grand Total	3,676	6,574	4,960	—	7,647	1,088	2	16,809	4,958	17,897



TABLE No. 2.

TOTALS OF BUILDINGS AND LANDS DISINFESTED.

	Dwelling-houses.	Business Premises.	Bombed Sites.	Other Lands.	Total.
From Rats .....	1,383	1,202	93	355	3,033
From Mice .....	615	72	—	45	732

TABLE No. 3.

TYPE AND QUANTITY (OUNCES) OF POISON BAIT TAKEN BY RATS IN LANDS AND BUILDINGS WHICH HAVE BEEN DISINFESTED AND THE ESTIMATED NUMBER OF RATS DESTROYED.

Arsenic.	Zinc Phosphide.	Barium Carbonate.	Red Squill.	Dead Rats found.	Estimated Rats destroyed.
2,081	4,821	483	3,780	5,151	25,648

TABLE No. 4.

TOTAL RATS DESTROYED BY TRAPPING AND POISONING DURING 1946.

Trapping.		Poisoning.	Total Rats Destroyed.
Rats caught.	Dead Rats Found.	Estimated Rats destroyed : Not Found.	
12,746	5,151	20,497	38,394

DISINFECTING & DISINFESTATION DEPARTMENT.

The staff of the Ambulance and Disinfecting Department is engaged in (1) the removal of cases of infectious disease to hospital by ambulance, (2) the disinfection of premises and articles exposed to infection, (3) the disinfestation of verminous houses and articles, (4) the supervision of the City mortuary. The number of cases of infectious disease removed to hospital was 4,477. The number of houses disinfected after infectious disease was 4,272, whilst the number of articles of bedding, clothing, etc., disinfected by steam after exposure to infectious disease was 69,552.

DISINFESTATION OF PREMISES AND HOUSEHOLD EFFECTS.

*Premises.* 2,223 Corporation houses and 1,666 Corporation tenements were inspected for vermin. 736 houses and 997 tenements were infested with bugs, and the table below describes the action taken in these cases.

	Corporation Houses.		Non-Corporation Houses.
	Houses.	Tenements.	
Verminous Furniture Treated—			
Families ... .. 159			
Number treated ... ..	755	997	0
Awaiting treatment at the end of the year ...	45	83	0

Treatment of manure middensteads and dumps for fly prevention—number treated 2,512.

City Mortuary.

The number of bodies removed to the mortuary was:—

From the river ... ..	9
From the city ... ..	328

### **Smoke Abatement.**

In accordance with national policy, industrial smoke abatement practice has been discontinued. The West Lancashire and Cheshire Regional Smoke Abatement Committee have suspended their operations for the duration of the war.

### **Water Supply.**

The following particulars have been kindly supplied by the Water Engineer.

The water supply in the area over the past year has been satisfactory, both in quantity and quality.

Bacteriological examinations are made regularly by the City Bacteriologist, these routine examinations being carried out both in the City and at Prescott Storage Reservoirs—the results of the chemical analyses have all been satisfactory.

The waters are not liable to plumbo-solvent action.

The supplies both from Rivington and Lake Vyrnwy are treated by slow sand filtration and chlorination, and further chlorination is carried out at Prescott Storage Reservoirs.

There are no parts of the area dependent upon standpipes for a supply.



## INSPECTION OF FOOD.

A numerical summary of the visits paid to premises by the food inspectors is given in Table I.

**TABLE I.**

VISITS PAID TO PREMISES BY FOOD INSPECTORS.

Slaughter-houses.	Butchers' shops.	Fruit shops.	Fish & Fruit shops.	Food Hawkers' premises.	Jam factor-ies.	Pickle factor-ies.	Ice Cream premises	Food factories	Knackers' yards.	Total visits paid.
—	12,858	15,894	12,805	1,974	29	38	2,417	491	4	46,510

### Private Slaughter-houses.

There are 4 private slaughter-houses in the city at which, during the year, no animals were slaughtered.

### The City Abattoir.

308,995 animals of different kinds were slaughtered in Liverpool for human food. An analysis of this figure is given in Table II.

**TABLE II.**

NUMBER OF ANIMALS SLAUGHTERED IN LIVERPOOL FOR HUMAN FOOD.

	Bulls	Bullocks	Cows	Heifers	Calves	Sheep and Lambs	Swine	Horses	Goats.
Public Abattoir	371	22,280	27,817	4,336	40,163	212,968	995	51	14
TOTALS	371	22,280	27,817	4,336	40,163	212,968	995	51	14

TABLE III.

CARCASES OF ANIMALS (HOME-KILLED) BROUGHT INTO LIVERPOOL FROM OTHER DISTRICTS.

Brought into the—	Beef.	Veal.	Mutton.	Lamb.	Pork.
Meat Market .. ...	4,613	2,281	58	—	215
TOTALS ...	4,613	2,281	58	—	215

In addition to the above, 2,931 boxes or packages of home-killed offal were dealt with in the meat market.

TABLE IV.

CARCASES OF IMPORTED (FROZEN AND CHILLED) MEAT PASSING THROUGH THE CITY MEAT MARKET.

Beef.	Veal.	Mutton.	Lamb.	Pork.
11,426	1,892	110,795	383,077	3,466

In addition to the above, 257,294 boxes and packages of imported meat and offal were dealt with in the meat market.

727 lbs. imported beef were destroyed for unsoundness, chiefly mould and brine damage.

### Diseased Conditions.

The carcasses of 54,640 animals showed abnormal conditions, and a detailed examination was made in each case, 2,565 carcasses being rejected as unfit for human food. Of these, 2,006 were destroyed at the abattoir and 559 were destroyed at knackers' yards. A description of the diseased conditions found during 1946 which led to the total or partial destruction of carcasses is given in Table V.

TABLE V.

Disease.	No.	Disease.	No.
Abscess (total) ... ..	1	Malignant Neoplasms ... ..	4
„ (partial) ... ..	70	Melanosis (total) ... ..	3
Arthritis, Septic (total) ... ..	4	„ (partial) ... ..	2
„ Simple (partial) ... ..	20	Moribund ... ..	17
Asphyxia ... ..	190	Nephritis Septic ... ..	17
Caseous Lymphadenitis ... ..	—	Parturient Fever ... ..	—
„ (partial) ... ..	—	Pyæmia ... ..	1
Contamination (partial) ... ..	9	Peritonitis Septic ... ..	14
Decomposition (total) ... ..	15	Peritonitis (partial) ... ..	1
„ (partial) ... ..	2	Pneumonia ... ..	17
Distomatosis ... ..	19	Pleurisy ... ..	9
Dropsy ... ..	162	Pleurisy (partial) ... ..	68
„ (partial) ... ..	—	Presternal Calcification (partial) ... ..	5
Emaciation ... ..	—	Sarcoma ... ..	1
Enteritis ... ..	343	Septicæmia ... ..	3
Foot and Mouth Disease (total) ... ..	—	Septic Mastitis ... ..	4
Gangrene (total) ... ..	—	„ Metritis ... ..	2
Gastritis (total) ... ..	—	„ Pericarditis ... ..	3
Immaturity ... ..	5	Swine Fever ... ..	—
Injury (total) ... ..	3	Swine Erysipelas ... ..	—
„ (partial) ... ..	345	Tuberculosis (total) ... ..	1,050
Jaundice ... ..	93	„ (partial) ... ..	1,335
Johnes Disease ... ..	3	Uræmia (total) ... ..	—
Joint Ill ... ..	22	Urticaria (partial) ... ..	4
Lymphadenoma (total) ... ..	1		

In addition to the number of carcasses totally destroyed because diseased conditions made them unfit for human food, a number of organs with localised disease were condemned.



Quantities of Food Materials Condemned as being unfit for Human Food.

TABLE VI.

Beef, Veal, Mutton, Pork.	Offal	Fish.		Crabs, Lobsters, Oysters, Crayfish, Shrimps, Prawns, Scallops.	Cockles, Mussels, and Winkles.	Poultry.	Game.	Rabbits and Hares.	Fruit.	Vegetables.	Nuts, Cokernuts, Almonds, etc.	Sundries	Canned Food- stuffs.	Eggs.
		Wet.	Dry.											
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Bags.	Head.	Head.	Head.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
706,898	1,287,282	331,270	77,884	5,890	256	2,226	206	657	81,559	278,283	13,220	475,256	157,802	—

### **The Tuberculosis Order, 1938.**

This Order aims at the destruction of cows suffering from tuberculosis in a form that is a source of danger to human beings and to other animals. During 1946, 42 cows were slaughtered under this Order at the City Abattoir.

### **Slaughter of Animals Act, 1933.**

The following applications for licences as slaughtermen were received, namely: 19 for renewal of existing licences and 202 temporary licences for the slaughter of animals for the food of Mohammedans. In each case the licence was granted.

### **Salvage of Foodstuffs.**

In addition to the ordinary examination and classification of foodstuffs submitted for inspection very many requests have been received from the Ministry of Food Salvage organisation, to examine and classify large and varied consignments of doubtful foodstuffs, a report being issued to the Ministry on each consignment. The origin of this type of foodstuffs being damaged ships, Army, Navy and Air Force Depots, surplus Ships' Stores, damaged goods in warehouses, etc.

For this purpose each consignment is on examination divided and classified as follows:—

- (a) Fit for retail trade.
- (b) Made fit for human food by reconditioning, and used for catering or manufacturing purposes.
- (c) Made fit for animal feeding by reconditioning.
- (d) Suitable for industrial purposes only.

# THE SUPERVISION OF COWSHEDS, DAIRIES AND MILKSHOPS.

## Registration of Dairies.

TABLE VII.

*(Milk and Dairies Order, 1926.)*

Number of registered dairies at the end of 1945.	New applications for registration.	Registration refused.	Dairies removed from the register.	Number of registered dairies at the end of 1946.
517	2	—	7	512

*(14 dairies were transferred from one owner to another.)*

## Inspection of Dairies.

1,433 visits of inspection were paid to dairies. In 16 instances infringements of the Milk and Dairies Order, 1926, were found. In every case the notice of requirements was complied with at once. The corresponding visits for 1945 were 2,626.

## Registration of Dairywomen.

TABLE VIII.

Number of registered dairywomen on Jan. 1st, 1946.	Applications for transfer of registration.	Applications refused.	Ceased to be dairywomen.	Remaining on the register, Dec. 31st, 1946.
524	14	—	4	520

Of the 520 dairywomen on the register at the end of the year, 8 were milk-hawkers who, having no premises of their own, are registered at the dairy from which they obtain their supplies and where they store their utensils.



### Conveyance and Distribution of Milk Churns.

Observations were made at railway stations and other distributing centres to ensure that Sections 28 and 29 of the Milk and Dairies Order, 1926, relating to the marking, construction and cleanliness of milk churns, were complied with. 3 notices were sent to farmers outside the city drawing their attention to defects in milk churns. In each case the defects were remedied.

### The Licensing of Places for Keeping Cattle.

(*Liverpool Corporation Act, 1921.*)

Under Sections 475 to 483 of the Liverpool Corporation Act, 1921, every person who keeps cattle is required to hold a licence from the Corporation both in respect of himself and also in respect of the premises. In Table IX is a summary of the register of licences in respect of milch cows and pigs.

TABLE IX.

LICENSING OF PREMISES ON WHICH MILCH COWS ARE KEPT.

	End of 1945.	End of 1946.
Number of licensed cowsheds... ..	148	140
Number of cows specified on the licences ... ..	2,920	2,785
Approximate average number of cows kept ... ..	2,378	2,142

(1 licence was transferred from one person to another.)

705 visits of inspection were paid to cowsheds. Twelve of the cowsheds visited were the subject of notices drawing the attention of the occupiers to contraventions of the Liverpool Corporation Act, 1921. All the notices were complied with, and no prosecutions were necessary nor was any licence forfeited because premises were not properly kept.

LICENSING OF PREMISES ON WHICH PIGS ARE KEPT.

	End of 1946.
Number of licensed piggeries ... ..	96
Number of pigs specified on the licences ... ..	3,676
Approximate average number of pigs kept ... ..	1,100

One new licence to keep pigs was applied for, involving the keeping of thirty pigs. This application was granted. Two licences were surrendered. 287 visits of inspection to piggeries were made, four piggeries visited were the subject of notices drawing the attention of the occupiers to contraventions of the Liverpool Corporation Act, 1921, and in every case the notice was complied with. In farms situated in the outer districts of the city, premises licensed for the keeping of milch cows may be also used for keeping store cattle. At the end of 1946 494 store cattle were kept on licensed premises.

### The Daily Supply of Milk to Liverpool.

The quantity of milk consumed in Liverpool daily is as follows:—

TABLE X.

DAILY CONSUMPTION OF MILK DURING 1946.

Grade of Milk.									Quantity in Gallons.
Tuberculin-tested (Certified)	...	...	...	...	...	...	...	...	12
Tuberculin-tested	...	...	...	...	...	...	...	...	1,300
Tuberculin-tested (Pasteurised)	...	...	...	...	...	...	...	...	5,600
Accredited	...	...	...	...	...	...	...	...	4,700
Raw ungraded	...	...	...	...	...	...	...	...	2,892
Pasteurised under licence	...	...	...	...	...	...	...	...	47,800
Heat-treated to pasteurisation standard	...	...	...	...	...	...	...	...	3,290
Sterilized	...	...	...	...	...	...	...	...	6,000
Total									71,594

The relative quantities of milk produced within the city or brought into the city by road or by rail are as follows:—

TABLE XI.

DAILY SOURCE OF MILK DURING 1946.

Produced from cows kept within the City.	Brought into the City by road.	Brought into the City by rail.
6,426 gallons	60,488 gallons	4,680 gallons

Total, 71,594 gallons.

### Graded Milk.

The daily quantity of graded milk consumed is given in Table X.

TABLE XII.

PRODUCERS AND VENDORS OF GRADED MILK IN LIVERPOOL.

Nature of licence or licences.	Tuberculin Tested (Certified) Milk	Tuberculin Tested Milk	Tuberculin Tested (Pasteurised) Milk	Accredited Milk	Pasteurised Milk.
Producer only ...	0	2	0	35	0
Producer and retail vendor ...	0	0	1	27	9
Retail vendor only ...	0	3	55	5	0

The following changes in licence-holders took place, namely: One new licence was granted to a producer of Tuberculin Tested milk. Eight new licences were granted to vendors of Tuberculin Tested (Pasteurised) Milk. The licences of one producer and two producer-retailers of "Accredited" milk were not renewed.

### The Provision of Milk for School Children.

Pasteurised milk only is supplied to school children under the Milk Marketing Board's Scheme. During March some 99,200 children were each supplied with a third of a pint daily. This number is approximately 95 per cent. of the children attending school. During the year, 84 samples were examined bacteriologically and chemically, and the results as a whole were highly satisfactory. None of the samples was found to be tuberculous.

### ICE-CREAM.

In 1942 the Ministry of Food prohibited the manufacture of ice-cream, but in November, 1944, the resumption of manufacture was permitted.

During the year 2,417 visits of inspection were made to ice-cream premises and 124 samples taken. The results of examination were satisfactory. In 67 per cent. of the samples the total count was under 10,000 organisms per c.c., and in 54 per cent. coliform bacilli were absent in 1 c.c.



## THE CLEANLINESS OF MILK.

### TABLE XIII.

EXAMINATION OF SAMPLES OF TUBERCULIN TESTED MILK.

Supplied by	Number of Samples	Where taken	METHYLENE BLUE REDUCTION TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.			
			Satisfactory.	Unsatisfactory.	Absent in 1 ml.	Present in 1 ml.	Present in $\frac{1}{10}$ ml.	Present in $\frac{1}{100}$ ml.
A	14	Hospitals and Institutions.	14	0	13	0	0	1
B	15		13	2	9	4	0	2
C	11		10	1	2	2	3	4
D	12	Do.	12	0	6	3	2	1
E	81	Wholesale depot	75	6	42	13	9	17
TOTALS	133		124	9	72	22	14	25

During the year there has been an intensive effort to encourage cow-keepers to produce cleaner milk, and the results summarised in Tables XIV and XV show that this effort met with success. Accredited milk produced within the City is considerably cleaner than that sent in from outside areas.

The bacteriological quality of Tuberculin-tested milk produced in areas outside and sent into the City was low (Table XIII). Approximately 7 per cent. of the samples failed to pass the methylene blue test, and 19 per cent. failed in the B. Coli test. Fortunately most of this milk is pasteurised in the City before reaching consumers.

### TABLE XIV.

THE EXAMINATION OF ACCREDITED MILKS PRODUCED IN LIVERPOOL.

Number samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
	Satisfactory.	Unsatisfactory.	Absent in 1 ml.	Present in			
				1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
18	666	52	377	89	145	69	38
	92.7%	7.2%	52.5%	12.4%	20.2%	9.6%	5.3%

## THE EXAMINATION OF ACCREDITED MILKS PRODUCED OUTSIDE LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
			Absent in	Present in			
	Satisfactory.	Unsatisfactory.	1 ml.	1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
36	32	4	21	5	4	6	
	88.8%	11.2%	58.4%	13.9%	11.1%	16.6%	

TABLE XV.

EXAMINATION OF SAMPLES OF UNGRADED AND UNTREATED MILK  
PRODUCED IN LIVERPOOL.

Month.	Number of Samples	METHYLENE BLUE REDUCTION TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
		Satis- factory.	Unsatis- factory.	Absent in 1 ml.	Present in			
					1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
January ...	38	36	2	22	3	7	5	1
February ...	44	44	0	21	7	8	8	0
March ...	42	38	4	21	5	5	8	3
April ...	43	38	5	17	3	14	7	2
May ...	45	43	2	17	13	7	8	0
June ...	46	38	8	11	10	11	7	7
July ...	41	23	18	7	5	9	9	11
August ...	37	29	8	8	5	7	10	7
September	43	35	8	9	7	13	6	8
October ...	40	31	9	8	5	10	10	7
November...	40	36	4	14	7	8	9	2
December...	37	37	0	10	4	14	9	0
TOTAL ...	496	428	68	165	74	113	96	48
		86.3%	13.7%	33.2%	14.9%	22.8%	19.3%	9.7%

## TUBERCULOUS MILK.

The Examination for Tuberculosis, of Milk produced  
within the City.

TABLE XVI.

Kind of Milk.	Number of samples.	Tubercle bacilli present.	Percentage tuberculous.
Graded milk ... ..	723	20	2·7%
Ungraded raw milk ...	491	14	2·8%

The Examination for Tuberculosis, of Milk produced in Areas  
outside the City.

TABLE XVII.

Kind of Milk.	Number of samples	Tubercle bacilli present.	Percentage tuberculous.
Graded milk ... ..	156	1	0·6%
Ungraded raw milk ...	96	8	8·3%

TABLE XVIII.

THE SITUATION OF AREAS OUTSIDE THE CITY FROM WHICH MILK SAMPLED  
FOR TUBERCULOSIS WAS DERIVED.

County.	Description of Milk.		Number of Tuberculous samples.		Tubercle bacilli present.	Percentage tuberculous.
	Ungraded.	Graded.	Ungraded.	Graded.	Totals.	
Lancashire ...	8	55	1	1	2	3·2%
Cheshire ... ..	78	88	6	—	6	3·8%
Denbighshire ...	8	—	1	—	1	12·5%
Flintshire ...	2	—	—	—	—	—
Shropshire ...	—	1	—	—	—	—
Cumberland ...	—	12	—	—	—	—
	96	156	8	1	9	3·6%



## THE ADULTERATION OF FOOD AND DRUGS.

During 1946, 3,683 samples of food and drugs were purchased or taken and submitted for examination. Of these samples, 388 were formal samples and 3,295 were informal samples.

TABLE XIX.

OFFENCES UNDER THE FOOD AND DRUGS ACT, 1938.

Number of Informations laid.	Nature of Sample.	Nature of Offence.	RESULT OF LEGAL PROCEEDINGS		
			Number of convictions.	Fines.	Costs.
17	Milk .....	Contained added water .....	17	£ s. d. 39 0 0	£ s. 20 8
2	Milk .....	Deprived of Milk fat .....	2	4 0 0	2 2
1	Beef Sausages	Deficient in Meat to extent of 38% ...	1	5 0 0	1 1
1	Beef Sausages	Deficient in Meat to extent of 28% ...	1	5 0 0	1 1
21			21	53 0 0	24 12
				77 12 0	

### Fertilisers and Feeding Stuffs Act,

During 1946, 39 samples of fertilisers and feeding stuffs were submitted for analysis. It was not necessary to take any legal proceedings.

### Pharmacy and Poisons Act, 1933.

The Pharmacy and Poisons Act, 1933, regulates the sale of poisons. It is the duty of the Local Authority to carry out Part II of the Act, which deals with the registration of persons selling poisons mentioned in the Poisons List Confirmation Order, 1935. The number of names entered in the register is 689. It was not necessary to take any legal proceedings.

## REPORT OF THE CITY BACTERIOLOGIST.

In 1946 the number of examinations amounted to 88,039 of which 9,696 were for outside authorities and 2,126 for the Armed Forces.

**PLAGUE.** None of the 3,329 rats examined were found infected with plague.

**ANTHRAX.** The Government Wool Disinfecting Station submitted 267 specimens of hair and wool for examination. Of these 134 were untreated and 57 contained anthrax bacilli; 133 were treated and of these none was infected with anthrax.

### Examinations made in the Bacteriological Department for the City of Liverpool during the year 1946.

Milk (fresh—liquid)	...	...	...	...	...	...	...	2,472
Foodstuffs	...	...	...	...	...	...	...	150
Water	...	...	...	...	...	...	...	1,186
Rats for plague	...	...	...	...	...	...	...	1,059
Swabs from throat and nose infections	...	...	...	...	...	...	...	40,508
Specimens for intestinal infections	...	...	...	...	...	...	...	2,204
Cerebro-spinal fluid, etc. for pathogenic organisms	...	...	...	...	...	...	...	52
Sputum, etc. for tubercle bacilli	...	...	...	...	...	...	...	1,615
Exudates for anthrax bacilli	...	...	...	...	...	...	...	61
Miscellaneous specimens	...	...	...	...	...	...	...	40
								<u>49,347</u>

#### Venereal Diseases :

Serological tests	...	...	...	...	...	...	...	23,206
Other tests	...	...	...	...	...	...	...	1,125
								<u>24,331</u>

#### Port Health Authority :

Wool and hair for anthrax bacilli	...	...	...	...	...	267
Rats for plague bacilli	...	...	...	...	...	2,270
Miscellaneous specimens	...	...	...	...	...	2
						<hr/> 2,539

**Examinations made for Outside Authorities (specimens charged) :**

Bacteriological	...	...	...	...	...	...	...	...	4,019
Venereal Diseases	...	...	...	...	...	...	...	...	5,677
									<u>9,696</u>

**Examinations made for the Armed Forces (no charge) :**

Bacteriological	...	...	...	...	...	...	...	...	347
Venereal Diseases	...	...	...	...	...	...	...	...	1,779
									<u>2,126</u>

**SUMMARY.****LIVERPOOL :**

Specimens of water, milk, foodstuffs and infectious material	...	...	...	...	...	...	49,347	
Venereal Diseases	...	...	...	...	...	...	24,331	
Port Health Authority	...	...	...	...	...	...	2,539	
								<u>76,217</u>

**OUTSIDE AUTHORITIES :**

Bacteriological	...	...	...	...	...	...	4,019	
Venereal Diseases	...	...	...	...	...	...	5,677	
								<u>9,696</u>

**ARMED FORCES :**

Bacteriological	...	...	...	...	...	...	347	
Venereal Diseases	...	...	...	...	...	...	1,779	
								<u>2,126</u>

Total	<u>88,039</u>
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## HOUSING.

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Owing to the War, and the terms of Ministry of Health Circular 1,866, dated September 8th, 1939, normal progress in regard to slum clearance has ceased. During the year, 374 houses were demolished and 166 persons re-housed.

### **Landlord and Tenant (War Damage) Amendment Act, 1941.**

Two houses were inspected during the year under the above enactment. One application for examination under the Act was made by landlords and one certificate of fitness was issued. One application for examination under the Act was made by a tenant, and it was found on examination that the dwelling-house had not been repaired so as to be deemed reasonably capable of being used for housing purposes.

### **Defence (General) Regulations, 1939. (Regulation 68AA).**

No applications were received for licences to re-open houses included in confirmed clearance orders, under the above regulations. 33 applications were received for the renewal of licences for the temporary re-occupation of houses included in confirmed clearance orders.

### **Increase of Rent and Mortgage Interest (Restrictions) Acts, 1920/1939.**

Certificates have been issued under the above Acts in respect of 117 dwelling-houses which were not in a reasonable state of repair.

## Houses Erected on Suburban Estates at 31st December, 1946.

(Including houses erected on the outskirts for slum clearance purposes.)

Estates.					Non-Parlour.	Parlour.	TOTAL.
Cantril Farm	...	...	...	...	6	—	6
Dovecot Estate	...	...	...	...	2,331	686	3,017
Edge Lane Drive Estate	...	...	...	...	560	311	871
Elms House Estate	...	...	...	...	252	—	252
Fazakerley Estate	...	...	...	...	1,030	410	1,440
Finch Lane	...	...	...	...	54	—	54
Highfield Estate	...	...	...	...	—	618	618
King Street, etc., Garston	...	...	...	...	76	—	76
Knotty Ash Estate	...	...	...	...	389	263	652
Knowsley Estate	...	...	...	...	874	—	874
Larkhill Estate	...	...	...	...	476	1,834	2,310
" " (Flats)	...	...	...	...	90	120	210
Norris Green Estate	...	...	...	...	4,730	2,965	7,695
Pinehurst Road Estate	...	...	...	...	287	395	682
Ronald Street	...	...	...	...	78	—	78
Sparrow Hall Estate	...	...	...	...	*539	63	602
" " " (Flats)	...	...	...	...	36	—	36
Speke (Banks Lane) Estate	...	...	...	...	286	—	286
Speke	...	...	...	...	1,040	698	1,738
Speke Road (Flats)	...	...	...	...	312	—	312
Springwood Estate	...	...	...	...	250	1,249	1,499
" " (Flats)	...	...	...	...	—	49	49
Walton-Clubmoor Estate	...	...	...	...	1,525	1,671	3,196
Woolton	...	...	...	...	467	96	563
Partly-developed Estates	...	...	...	...	—	554	554
Total within the area of the City					15,688	11,982	27,670
Brook House	...	...	...	...	108	—	108
Huyton Farm Estate	...	...	...	...	937	79	1,016
Knowsley Estate	...	...	...	...	4,076	768	4,844
" " (Flats)	...	...	...	...	108	—	108
Total outside the City boundary					5,229	847	6,076
GRAND TOTAL					20,917	12,829	33,746

\*Including 20 experimental non-timber houses.

In addition there are 137 flats attached to shops and maintenance depots on various estates.

The number of houses inspected for housing defects under Public Health or Housing Acts was 1,196, and the number of inspections made for the purpose was 1,343.

Notices were served requiring defects to be remedied under the Public Health Act in respect of 29,507 houses. The number of dwelling-houses in which defects were remedied after service of formal notices was 14,383, and 11,858 defective dwelling-houses were rendered fit in consequence of informal action.

### Housing Act 1936, Part IV. Overcrowding.

74,387 visits were made to houses in connection with the overcrowding provisions of the Housing Act.

### Houses Owned by the Local Authority.

Total number of houses and flats owned by the Local Authority at 31st December, 1946 (excluding 20 houses built under the powers of the Housing Acts and subsequently sold, and 1,050 temporary bungalows) of these, 254 houses and flats are under the control of the County Borough of Bootle ... .. 42,421

Number of houses built in the last two years under—

1.	Housing Act, 1936, Part III	...	...	...	Nil
2.	" " " Part V	...	...	...	234

The following table shows the accommodation which has been provided in the Corporation's housing and rehousing schemes up to 31st December, 1946.

No. of rooms per dwelling (exclusive of bathroom, sculleries, etc.)	Number of Houses and Flats erected.					TOTALS.
	On Suburban Estates.			In Central Areas.		
	Houses.	Aged persons' cottages.	Flats.	Houses.	Flats.	
1	—	130	18	—	222	370
2	—	220	96	—	1,729	2,045
3	1,443	—	251	18	2,978	4,690
4	18,094	—	207	158	3,175	21,634
5	13,123	—	151	18	235	13,527
6	12	—	—	—	18	30
7	1	—	—	—	—	1
TOTALS ...	32,673	350	723	194	8,357	42,297



In addition there are 137 flats over shops or attached to maintenance depots and 7 cottages acquired in the purchase of building sites.

## Rentals.

The weekly rentals of flats (including rates), range from 2/10d. for a bed living room flat to 11/7d. for a five bedroom flat. The inclusive weekly rentals of houses vary between 8/8d. for the non-parlour type, and 24/6 per week for houses with garages, and for Aged Persons Cottage Flats 4/- and 5/6d. per week.

## General Statistics.

Area of City	...	...	...	...	...	...	...	27,321 acres
Number of inhabited houses at 31st December, 1946						...	...	190,856
Number of structurally separate dwellings occupied (1931 Census)...								173,938
Rateable value	...	...	...	...	...	...	...	£6,598,494
Sum represented by a Penny Rate			...	...	...	...	...	£25,906

APPENDIX A.

CITY OF LIVERPOOL.

Birth-Rates, Death-Rates, and Analysis of Mortality during the year 1946.

England and Wales, London, 126 County Boroughs and Great Towns, and 148 Smaller Towns. (Provisional Figures)

	Rate per 1,000 Population.		Annual Death-Rate per 1,000 Population.								Rate per 1,000 Live Births.	
	Live Births.	Still-births.	All Causes.	Typhoid and Paratyphoid Fevers.	Small-pox.	Measles.	Scarlet Fever	Whooping Cough.	Diphtheria.	Influenza.	Diarrhoea and Enteritis (under two years).	Total Deaths under one year.
England and Wales ... ..	19·1	0·53	11·5	0·00	0·00	0·00	0·00	0·02	0·01	0·15	4·4	43
126 County Boroughs and Great Towns, including London ... ..	22·2	0·67	12·7	0·00	0·00	0·01	0·00	0·02	0·01	0·13	6·1	46
148 Smaller Towns (Resident Populations 25,000 to 50,000 at Census 1931) .. ...	21·3	0·59	11·7	0·00	0·00	0·00	0·00	0·02	0·01	0·14	2·8	37
London ... ..	21·5	0·54	12·7	0·00	...	0·01	0·00	0·02	0·01	0·12	4·2	41
Liverpool ... ..	25·2	0·73	13·2	0·00	0·00	0·03	...	0·05	0·03	0·09	8·7	74

The maternal mortality rates (provisional) for England and Wales are as follows : per 1,000 Total Births ... Puerperal Sepsis, 0·31 Others 1·12 Total. 1·43





## CITY OF LIVERPOOL.

Causes of, and ages at, Death during the year 1946.

Causes of Death.		NET DEATHS AT VARIOUS AGES, OF "RESIDENTS," WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.									Total Deaths in Liverpool District, whether of "Residents" or "Non-Residents."
		At all ages.	AT AGES—YEARS.								
			Under 1	1—	3—	5—	15—	25—	45—	65—	
All Causes	Certified .....	9657	1379	111	47	117	230	747	2430	4596	10804
	Uncertified .....	14	3	—	—	—	—	2	4	5	14
1. Typhoid and Paratyphoid Fevers .....		—	—	—	—	—	—	—	—	—	—
2. Measles .....		25	11	11	2	—	—	—	1	—	26
3. Scarlet Fever .....		—	—	—	—	—	—	—	—	—	—
4. Whooping Cough .....		38	31	6	—	1	—	—	—	—	44
5. Diphtheria .....		25	2	11	5	5	1	1	—	—	29
6. Influenza .....		67	3	—	1	3	1	1	23	35	68
7. Encephalitis Lethargica .....		16	—	—	—	1	1	3	7	4	17
8. Cerebro-spinal Fever .....		13	11	2	—	—	—	—	—	—	14
9. Tuberculosis of Respiratory System ..		579	4	—	—	4	109	232	186	44	634
10. Other Tuberculous Diseases .....		78	7	14	8	20	9	10	9	1	96
11. Syphilis .....		45	10	—	1	—	—	5	20	9	54
12. General Paralysis of the Insane .....		4	—	—	—	—	—	—	2	2	6
13. Cancer .....		1312	—	1	—	4	4	103	576	624	1497
14. Diabetes .....		60	—	—	—	—	1	6	21	32	67
15. Cerebral Haemorrhage .....		600	—	1	—	2	2	10	160	425	675
16. Heart Disease .....		2000	3	—	1	2	27	88	509	1370	2159
17. Aneurysm .....		—	—	—	—	—	—	—	—	—	—
18. Other Circulatory Diseases .....		638	—	—	—	—	1	6	142	489	701
19. Bronchitis .....		729	29	3	—	—	1	18	227	451	776
20. Pneumonia (all forms) .....		565	241	23	2	3	2	25	117	152	638
21. Other Respiratory Diseases .....		191	2	1	—	—	1	11	36	50	116
22. Peptic Ulcer .....		73	—	—	—	—	—	9	37	27	90
23. Diarrhoea, etc. ....		318	286	5	—	1	1	4	7	14	356
24. Appendicitis .....		22	—	1	—	4	1	4	7	5	24
25. Cirrhosis of Liver .....		12	—	—	—	1	—	4	4	3	13
26. Other Diseases of Liver .....		27	6	1	—	—	—	3	11	6	35
27. Other Digestive Diseases .....		117	14	—	1	2	2	6	40	52	143
28. Acute and Chronic Nephritis ...		195	2	1	1	4	9	25	62	91	218
29. Puerperal Sepsis .....		2	—	—	—	—	—	2	—	—	3
30. Other Puerperal Causes .....		17	—	—	—	—	5	11	1	—	21
31. Congenital Debility, Premature Birth, Malformations, etc. ....		591	574	3	2	5	1	5	1	—	702
32. Senility .....		428	—	—	—	—	—	—	—	428	453
33. Suicide .....		73	—	—	—	1	1	27	33	11	76
34. Other Violence .....		251	27	12	15	23	13	40	46	75	290
35. Other Defined Causes .....		647	118	15	8	31	37	89	150	199	773
36. Causes Ill-defined or unknown.....		3	1	—	—	—	—	1	—	1	4
TOTALS .....		9671	1382	111	47	117	230	749	2434	4601	10818



## CITY OF LIVERPOOL.

## Infant Mortality during the year 1946.

Net Deaths from stated Causes at various Ages under One Year.

CAUSE OF DEATH.							Under 1 Week.	1 Week and under 2 Weeks.	2 Weeks and under 3 Weeks.	3 Weeks and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under One Year.
All Causes.	Certified	...	...	...	...	...	386	84	122	101	693	290	200	123	73	1,379
	Uncertified	...	...	...	...	...	1	—	—	—	1	—	—	1	1	3
Typhoid Fever	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	...	...	...	...	...	...	—	—	—	—	—	—	2	1	—	3
Measles	...	...	...	...	...	...	—	—	—	—	—	1	2	4	4	11
Scarlet Fever	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Whooping Cough	...	...	...	...	...	...	—	—	—	—	—	7	16	5	3	31
Diphtheria	...	...	...	...	...	...	—	—	—	—	—	—	—	1	1	2
Cerebro Spinal Fever	...	...	...	...	...	...	—	—	—	—	—	1	3	2	5	11
Influenza	...	...	...	...	...	...	—	—	—	1	1	—	1	—	1	3
Dysentery	...	...	...	...	...	...	—	—	—	—	—	2	—	—	—	2
Erysipelas	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis	...	...	...	...	...	...	—	—	—	—	—	1	—	1	2	4
Tuberculous Meningitis	...	...	...	...	...	...	—	—	—	—	—	—	1	1	—	2
Other Tuberculous Diseases	...	...	...	...	...	...	—	—	—	—	—	—	3	2	—	5
Meningitis (not Tuberculous)	...	...	...	...	...	...	—	—	1	—	1	2	1	1	—	5
Convulsions	...	...	...	...	...	...	1	—	1	—	2	2	1	1	—	6
Bronchitis	...	...	...	...	...	...	—	—	1	—	1	7	11	7	3	29
Pneumonia (all forms)	...	...	...	...	...	...	13	9	18	19	59	70	54	32	26	241
Diarrhoea	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Enteritis	...	...	...	...	...	...	2	14	39	40	95	86	54	35	16	286
Other Diseases of Stomach	...	...	...	...	...	...	—	—	—	1	1	—	—	1	—	2
Syphilis	...	...	...	...	...	...	—	—	—	2	2	6	1	1	—	10
Rickets	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Suffocation	...	...	...	...	...	...	—	—	—	1	1	8	8	—	—	17
Injury at Birth	...	...	...	...	...	...	38	1	4	—	43	2	—	—	—	45
Atelectasis	...	...	...	...	...	...	52	4	4	—	60	1	—	—	—	61
Malformations	...	...	...	...	...	...	35	19	9	5	68	16	6	3	—	93
Premature Birth	...	...	...	...	...	...	218	30	28	11	287	26	4	—	—	317
Atrophy, Debility and Marasmus...	...	...	...	...	...	...	1	1	4	5	11	7	1	—	—	19
Other Causes	...	...	...	...	...	...	27	6	13	16	62	45	31	26	13	177
							387	84	122	101	694	290	200	124	74	1,382

Net Births in the year { Legitimate ... 17,177  
 { Illegitimate ... 1,351

Net Deaths in the year of { Legitimate Infants 1,213  
 { Illegitimate Infants 169





CITY OF LIVERPOOL.

Notifiable Diseases (other than Tuberculosis) during the Year 1946.

DISEASE.	NUMBER OF CASES NOTIFIED.													Cases admitted to Hospital	TOTAL DEATHS
	At all Ages.	At Ages—Years													
		Under 1	1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	65—		
Small-pox .....	11	—	—	—	—	2	1	1	1	2	4	—	—	11	2
Scarlet Fever .....	1999	12	49	100	154	153	852	445	130	77	24	3	—	840	—
Diphtheria .....	518	15	21	35	47	36	188	81	35	47	7	6	—	509	25
Enteric Fever (including Para-typhoid) .....	7	1	—	—	—	—	—	—	3	2	—	1	—	7	—
Puerperal Pyrexia.....	286	—	—	—	—	—	—	—	16	222	46	2	—	270	—
Pneumonia .....	1057	117	92	96	51	39	92	37	47	140	104	181	61	199	142
Cerebro-spinal Fever .....	48	20	7	2	4	—	8	—	1	2	1	2	1	46	13
Poliomyelitis and Polioencephalitis ..	15	3	1	2	1	—	3	4	1	—	—	—	—	15	4
Encephalitis Lethargica .....	1	—	—	—	—	—	—	1	—	—	—	—	—	1	16
Dysentery .....	160	26	18	19	8	9	25	16	5	9	2	8	15	146	4
Ophthalmia Neonatorum .....	256	256	—	—	—	—	—	—	—	—	—	—	—	155	—
Erysipelas .....	253	1	—	—	—	2	5	7	5	34	45	116	38	133	4
Malaria .....	98	—	—	—	—	—	1	—	—	70	22	5	—	63	3
Anthrax .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles .....	6040	429	815	1010	1034	852	1763	100	20	15	2	—	—	553	25
Whooping Cough .....	1730	233	255	285	281	235	425	11	2	1	—	2	—	320	38
TOTALS .....	12479	1113	1258	1549	1580	1328	3363	703	266	621	257	326	115	3268	276





## DEATHS REGISTERED DURING THE YEAR 1946

DISEASES	SEX		AGE—BELOW																				REGISTRATION DISTRICT (SOUTH)	REGISTRATION DISTRICT (NORTH)	TOTALS.		
	Males.	Females.	1	2	3	4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80				90	Over 90
ALL CAUSES .....	5021	4650	1382	80	31	23	21	70	47	104	126	159	162	181	247	376	501	653	901	1126	1226	1125	1035	89	3602	6069	9671
I.—Infectious and Parasitic Diseases .....	541	389	89	31	14	11	7	22	15	46	78	81	58	63	60	59	74	63	59	42	28	23	7	...	252	678	930
II.—Cancer and other Tumours .....	689	648	...	1	...	...	...	3	4	3	3	11	18	28	53	98	131	157	201	218	210	123	73	2	526	811	1337
III.—Rheumatism and other General Diseases .....	63	114	1	2	...	...	...	6	9	7	6	8	5	3	8	3	13	15	16	25	22	19	7	1	71	106	177
IV.—Diseases of the Blood .....	36	42	1	...	...	...	...	2	1	1	1	1	...	2	2	3	4	6	5	12	12	17	6	2	32	46	78
V.—Chronic Poisoning .....	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VI.—Diseases of Nervous System .....	379	441	94	10	1	1	3	7	1	7	10	7	13	13	11	30	27	55	76	134	113	100	69	2	282	538	820
VII.—Diseases of Circulatory System .....	1269	1369	3	...	...	...	...	1	1	1	18	10	14	17	18	45	76	117	175	283	385	493	485	44	990	1648	2638
VIII.—Diseases of Respiratory System .....	818	577	272	22	5	2	...	2	1	...	4	6	10	12	26	49	77	102	152	187	164	154	139	9	520	875	1395
IX.—Diseases of Digestive System .....	318	251	306	6	1	1	...	6	2	2	2	1	9	10	10	18	20	25	43	36	28	25	18	...	245	324	569
X.—Diseases of Genito Urinary System .....	193	137	6	2	...	1	...	1	3	6	3	6	8	11	11	16	19	34	33	53	50	38	26	2	133	195	329
XI.—Diseases of Pregnancy .....	...	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XII.—Diseases of Skin .....	7	10	6	...	...	...	...	...	...	...	2	3	9	1	...	3	1	...	...	...	...	...	...	...	...	...	...
XIII.—Diseases of Bones .....	9	3	2	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIV.—Congenital Malformations .....	53	57	93	1	2	...	...	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XV.—Diseases of Early Infancy .....	267	214	481	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XVI.—Old Age .....	148	280	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XVII.—Deaths from Violence .....	225	99	27	5	7	5	10	18	6	9	5	16	18	17	16	18	17	19	25	25	44	116	231	28	112	316	428
XVIII.—Ill-defined Diseases .....	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class 1.—Typhoid Fever .....	4	9	11	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Scarlet Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Whooping Cough .....	16	22	31	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Diphtheria .....	12	13	2	5	6	3	2	4	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Erysipelas .....	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Tuberculosis of Resp. Syst. ....	344	235	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Tuberculosis Meningitis .....	12	19	2	5	2	3	1	9	4	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Tuberculosis of Intestines, etc. ....	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Tuberculosis of other Organs .....	30	11	5	3	4	2	2	3	2	5	...	2	3	2	1	2	2	1	1	...	...	...	...	...	...	...	...
"  Dysentery .....	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Malaria .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Syphilis .....	31	8	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Locomotor Ataxia .....	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  General Paralysis of Insane .....	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Influenza .....	33	34	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Smallpox .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Measles .....	13	12	11	10	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Acute Poliomyelitis .....	1	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Encephalitis Lethargica .....	9	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
"  Other Infectious Diseases .....	14	9	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class 2.—Cancer of Buccal Cavity .....	35	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...											



